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The effectiveness and cost-effectiveness of community-based social innovations (CBSIs) for healthy ageing in middle- and high-income countries: a systematic review

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The effectiveness of community-based social innovations for healthy ageing in middle- and high-income countries: a systematic review

Abstract

Background: Community-based social innovations (CBSIs) are one type of intervention that may help to address the complex needs of ageing populations globally.

Methods: We conducted a systematic review of CBSIs for healthy ageing in middle- and high-income countries, including any CBSI that aimed to empower people aged 50 and over by motivating them to take initiative for their own health and wellbeing. The protocol was registered with Prospero (CRD 42016051622). A comprehensive search was conducted in 15 academic databases and advanced search in Google. We included published studies from 2000 onwards in any language. Exploratory meta-analysis was conducted for quantitative studies reporting similar outcomes, and qualitative studies were analysed using thematic analysis. Narrative synthesis was conducted. Searches yielded 13,262 unique hits, from which 44 papers met the inclusion criteria.

Results: Most studies reported interventions having positive impacts on participants, such as reduced depression, though the majority of studies were classified as being at medium or high risk of bias. There was no evidence on costs or cost-effectiveness and very little reporting of outcomes at an organization or system level. CBSIs have the potential for positive impacts, but with nearly half of studies coming from high-income urban settings (particularly the United Kingdom and the United States of America), there is a lack of generalizisaability of these findings.

Conclusions: Our research highlights the need to improve reporting of CBSIs as complex interventions, and for improved conceptualization of these interventions to inform research and practice.

Keywords: ageing, systematic reviews, community-based

Background

Globally, around 962 million people (2017), or 13% of the population, are aged over 60 (1). Already in regions such as Europe over a quarter of the population is in this age group and it is estimated that this will be the case in all world regions by 2050 (1). This highlights the need for health and social care systems to adapt to meet the complex needs of older people (2).

Health systems have typically been designed to meet largely acute needs. This has led, especially in middle-income countries, to a lack of provision or barriers to access for many older people who do not qualify for acute treatment but nevertheless require frequent and resource-intensive care (2). In response to these challenges a number of reports (3, 4) have highlighted the need for research into new ways providers can work together to provide health and social care to older people. Community-based social innovations (CBSIs) are one type of innovation that may help to address the needs of older people that are not currently met through formal systems of health and social care. In the context of ageing, CBSIs can be understood as initiatives that seek to empower older people to improve self-efficacy in caring for themselves and their peers, with the aim of maintaining wellbeing through promoting social cohesion and inclusiveness (4).

Previous research and consultations, led primarily by the World Health Organization (WHO) and focused on low-income countries, have helped to define CBSIs and have outlined three main principles underpinning these innovations, namely: the empowerment of older people to care for themselves where possible; a focus on social inclusion; and the maintenance of wellbeing within disease, disability and declining health (4). In relation to health, the work by the WHO has highlighted that CBSIs have the potential to reduce costs and improve care for older people, to help to fill gaps in vertical health and care systems, and to improve autonomy and empower older people to make their own decisions over their health and daily living (4). These conclusions were not, however, based on robust evaluative research,

highlighting the need to strengthen the evidence base around CBSIs. While systematic reviews are available for community-based interventions in relation to health and ageing (5, 6), our focus on CBSIs with the underpinning ethos of empowerment, social inclusion and maintenance of wellbeing is original. It is particularly timely to assess the evidence base for CBSIs, as the policy agenda in many countries is moving towards one where factors such as social isolation have prominence in relation to health (7) and new models of care are seeking innovative ways of working with third sector and community organizations(8). It is also important to ascertain to what extent there is common experience in the types of CBSIs and therefore potential for lessons to be drawn across middle- and high- income country settings. To our knowledge, there is no published systematic review that attempts to synthesize evidence around CBSIs in these settings, and this is the first systematic review of CBSIs for all older people whatever their health status.

Aims

We conducted a systematic review on CBSIs for healthy ageing in middle- and high- income countries and in doing so provide an overview of included studies, assessment of quality of research, account of reported outcomes and synthesis of evidence around effectiveness and cost-effectiveness of CBSIs.

Methods

The protocol for this systematic review was registered with the PROSPERO database (CRD 42016051622).

Inclusion criteria

The pre-specified participant(s) and setting(s), intervention(s), comparison(s), outcome(s) and study design(s) (PICOS) criteria are detailed in Table 1. We used the definition of CBSIs as initiatives that seek to empower older people to improve their self-efficacy in caring for themselves and their peers, with the aim of maintaining their well-being through promoting social cohesion and inclusiveness (4). To differentiate from other health and social care led interventions, we excluded those that were solely implemented by health service or social care

staff and those where there was no evident community responsibility or engagement. A minimum 1 year of intervention duration was chosen in order to find sustainable interventions. The year 2000 was chosen based on knowledge of the evolution of CBSIs and to make the report relevant to the present-day health policy and demographic context.

Search strategy

The following databases (and platforms) were searched between October and November 2016: MEDLINE (OVID), Academic Search Complete, CINAHL (EBSCO), ERIC (EBSCO), PsychInfo (EBSCO), Social Science Abstracts, Embase (Elsevier), PAIS International, Web of Science, SCOPUS, PolicyFile, Sociological Abstracts, JSTOR, ClinicalTrials.gov and Dissertations Abstracts. An internet search was performed using advanced Google. Therefore, the search strategy captured both academic and grey literature. Searches used combinations of Medical Subject Headings (MeSH) terms and keywords. Search strategies for the databases are presented in Table 2. Reference lists of relevant systematic reviews and included studies were checked for additional studies.

Study selection

Two reviewers (IG and LL) independently scrutinized all titles and abstracts, with each scrutinising half, and a third reviewer (CMi) cross-checked 20 per cent of them. Next, three reviewers (IG, LL and CMe) independently screened full texts of all potentially eligible studies against the predefined criteria. At each stage, disagreements were resolved by consensus among researchers.

Data Extraction

Extraction tables were designed and piloted. They captured details on participants, intervention, comparator, outcomes and study design. Numerical results were extracted for quantitative outcomes and narrative accounts, and supporting quotes were recorded for

qualitative outcomes. Each study's findings were extracted by one reviewer (IG or LL), and each reviewer checked the other's extracted data.

Assessment of risk of bias

The quality assessment of quantitative studies was based on evaluation of selection, performance, attrition rates and detection of biases. The quality assessment of the qualitative studies was based on the Critical Appraisal Skills Programme (CASP) qualitative research assessment checklist (9). Assessment decisions were based on discussions between IG and LL, which considered all checklist domains as well as the overall trustworthiness of results using the methodology described in Shenton (10).

Evidence synthesis

The results are presented in narrative form with data presented in tables. Exploratory meta-analysis was conducted for studies where similar outcomes were reported, using standardized mean differences because of the heterogeneity of outcome measures, and random effects models because of the heterogeneity of study populations, interventions and comparators. Studies that used qualitative research methods were synthesized based on thematic analysis. This three-step process described in Thomas and Harden (11) involves coding 'line-by-line' from the findings of qualitative studies, generating descriptive themes or categories that remained close to the manifest content, and developing analytical themes that capture latent meaning. IG and LL performed the coding. IG generated the descriptive and analytical themes, which were discussed and further refined by IG and EP.

Results

Searches yielded 23,337 titles and abstracts. After removing duplicates 13,262 remained, of which 13,007 were excluded based on the title and abstract. The majority of screened studies were in English, which may have in part resulted from the search terms being in

English. Full papers for 255 articles were assessed for inclusion (Figure 1), of which 44 papers, all published in English, met the inclusion criteria. A full list of excluded and included studies are provided in Tables 3 and 4.

Description of included studies

Participants

The number of participants varied between 8 and 1783. Most studies (28/44) included participants that were all older than 65, and mean ages, where given, ranged from 60.2 to 78.9 years. Most of the studies were conducted in high income country populations, and nearly half (20/44) were conducted in populations from just two countries: the UK (9 studies) and USA (11 studies). Details of participants' characteristics are presented in Table 5.

From the 44 included studies, only 16 recorded participants' health conditions. Four studies included participants with a combination of diseases, five with mental health problems, three with dementia, and one with each of HIV, ischaemic heart disease, breast cancer surgery and diabetes. Only nineteen studies reported the ethnicity of participants, and three did not report the gender of participants. While not extracted in Table 5, there was little data across all studies on the educational level of participants, economic situation, family status (with family, divorced, widowed, living with children, etc) and access to certain services (e.g. social services).

Interventions and comparators

The wide range of interventions described in the studies is summarized in Table 6, along with their comparators. There is very little similarity between these complex interventions or their comparators so any attempts to combine interventions in the form of meta-analysis is exploratory at best.

Outcomes

The quantitative studies reported a very wide range of outcomes including:

- Clinical measurements e.g. BMI, biochemical and haematological measures
- Psychological health

- Quality of life
- Wellbeing
- Performing activities e.g. walking, gardening, exercise
- Knowledge e.g. dietary management
- Social support and social skills
- Autonomy and empowerment
- Fall incidence
- Resource use e.g. hospital bed days, costs

A comparative analysis of these quantitative outcomes shows that there is some limited commonality of outcome reporting across the studies (Table 7).

The qualitative studies focused on the following outcomes, as summarized in Table 8:

- Social interaction (avoiding isolation)
- Sense of health and wellbeing
- Mental health
- Learning new skills
- Resilience
- Satisfaction with the CBSI services

We considered several types of outcomes, which were initially categorized according to level of impact: (1) citizen, (2) organizational (CBSI) and (3) system (social care, hospital care or other health services). All included studies (both quantitative and qualitative) reported outcomes at the citizen level. One study (12) presented outcomes, such as uptake of an influenza vaccination and eyesight tests, which could be interpreted as system outcomes. No study presented organizational outcomes, such as sustainability, costs or cost-effectiveness.

Study designs

Thirty-one studies reported quantitative results and 20 reported qualitative results (7 studies reported both). The study designs for quantitative studies were 2 cluster RCTs, 4 RCTs, 1 controlled trial, 1 matched cohort, 7 controlled cohort, 8 cohort, 1 case control, 2 case series with historical control, 1 cross-sectional survey with concurrent control and 4 cross-sectional survey with historical control. In several of the included papers, the study design was not well reported. For example, a case series study of the impacts of an intergenerational and intercultural project connecting students and older people through language learning did not provide enough information about its study design for reviewers to assess the risk of performance bias, attrition bias or detection bias (13). Similarly, two cohort studies – one matched (14) and one with a historical control (15) – did not provide enough information for reviewers to assess the risk of two out of the three aforementioned sources of bias. Most of the qualitative studies were interview studies with some focus groups, open-ended questions in surveys and participant observation. As with the quantitative studies, there were several weaknesses in how the qualitative study designs were reported. Two provided insufficient information for reviewers to determine whether the research design was appropriate for addressing the associated research aims (15, 16), seven provided insufficient information about the recruitment strategy to determine whether an appropriate approach was employed (16-22), and four provided insufficient information about the data collection strategy to determine the same (13, 15, 18, 23).

Quality assessment of included studies

The vast majority of the studies were classified as having either medium (18 studies) or high (14 studies) risk of bias. It is important to note that most studies gave insufficient details to allow us to assess all aspects of quality, so our classification may not be accurate. Details of quality assessment are provided in Tables 9-10.

Impact of the interventions

In terms of effectiveness, most studies reported that the interventions had positive impacts on the participants. Statistically significant results demonstrating improvement in outcomes for the intervention compared to control groups were shown in the following studies: Cohen

2006 (24) – a variety of physical and mental health indicators, Cohen-Mansfield 2010 (25) – mental health and social life, Cordella 2012 (13) – satisfaction, Coull 2004 (26) – exercise, diet and health service use, Creech 2013 (27) – relatedness, Droes 2004 (28) – inactivity, non-social and depressive behaviours, Even-Zohar 2014 (29) – quality of life, Greaves 2006 (30) – quality of life, social support, Hillman 2002 (31) – quality of life and wellbeing, Ho 2007 (32) – perceived health status and wellbeing, Paul 2016 (15) – quality of life, Phelan 2002 (33) – health, wellbeing and physical inactivity, Thomas 2012 (34) – physical fitness and Wurzer 2014 (35) – fewer falls. However, the quality of evidence supporting effectiveness varied, limiting the degree of attribution between intervention and outcomes.

Table 11 shows the analysis of whether meta-analysis was possible from included studies with numerical results. It was possible to conduct exploratory meta-analyses for two of the outcomes– depression and social support (Figure 2 and Figure 3).

The results suggest that there is insufficient evidence to demonstrate that CBSIs were associated with any improvement in social support, but they show a small reduction in depression at follow up (SMD = -0.70 (95%CI -1.34 to -0.06). However, the interventions and outcome results were too heterogeneous to warrant further inference from these exploratory meta-analyses. For both the depression and social support meta-analyses, the outcomes used in individual studies were dissimilar to each other in the way in which they were measured, hence the high heterogeneity of the results.

It is important to note here that the number of studies not contributing to the meta-analysis was significant, as can be seen in Figures 2 and 3. The majority of studies did not provide an estimate of the measure of spread (standard deviations, ranges or inter-quartile ranges) for both the intervention and control arms, and it was therefore not possible to generate standardised mean differences for these studies. These studies have been left in the meta-analyses to highlight that the summary standardised mean differences are generated from a very small subset of the included studies, so are unlikely to be representative of the overall body of evidence. Only 5 out of the 11 studies included in the depression meta-analysis contributed standardised mean differences, and the same was true for just 4 out of the 9

studies that measured social support. This may have contributed to the findings, and it is possible that the results of the meta-analysis are not representative of the entire body of evidence identified for inclusion in this review.

Thematic Analysis

Through our thematic analysis of the 20 studies using qualitative research methods, we identified a number of descriptive themes that we grouped into four analytical themes (Table 12). It is worth noting that most of the papers for which qualitative results were extracted are on involved interventions in high-income countries.

Analytical Theme 1: CBSIs gave a sense of togetherness by fostering social interaction

This analytical theme came through strongly in almost all of the included papers (19/20). The strongest evidence within the selected studies, based on number of papers and assessment of quality, shows that CBSIs can bring about a sense of companionship and camaraderie, for example the shared experience and mutual support gained from a men's cooking group activity (36). This finding was identified for CBSIs operating in a wide range of settings and samples of participants.

Twelve studies reported that CBSIs helped beneficiaries avoid social isolation and loneliness, for example workshops and psychological support groups for older persons affected by a particular life situation, e.g. 'Grandmothers against poverty and AIDS' (23). The studies that contributed to the overall theme of fostering social interaction varied when it came to assessment of bias (five assessed as being at low risk (17, 30, 37-39), seven medium (20-22, 36, 40-42) and seven high (13, 15, 16, 18, 23, 32, 43)).

Analytical Theme 2: CBSIs were seen as contributors to improved health and sense of wellbeing

Nine papers presented findings which revealed positive impacts on health and wellbeing (three assessed as being at low risk of bias (17, 30, 39), three medium (20, 36, 41) and three high (16, 19, 23)). Greaves et al (30) found a series of health and wellbeing related outcomes for participants in the '*Upstream Healthy Centre'*. The intervention for older

socially isolated people involved visits and telephone contacts from mentors and led to improved mental health, increased physical activity, improved cognitive awareness, reduced risk of falls, better sleep and improved health behaviours. Four papers (three assessed as being at low risk of bias (17, 30, 39)) reported improvements in mental health, for example Dickson et al (39), who evaluated a health promotion project for older Aboriginal women. The project activities included morning get-togethers, home meetings, participation in community committees, community development workshops and special celebrations. The study found that the participation in the CBSI had a therapeutic effect through providing an opportunity for participants to give each other psychological support and act as mentors and counsellors.

Increased physical activity was also reported in four interventions, for example '*Men in Sheds*', which provided spaces in the form of sheds for older men to meet, teach and learn new skills, and participate in 'do-it-yourself' activities (16), and the Silver Song Club project, a community-based initiative for older persons to come together and sing (20).

Analytical Theme 3: CBSIs were equipping participants with new skills that enabled independence and empowerment

Eleven studies reported that CBSI attendance was linked to increasing the desire and ability to do other activities outside of that offered within the CBSIs, enhancing the enjoyment of life, equipping older people with new skills, making for a rewarding experience accompanied by a sense of empowerment and achievement, and gaining independence. All these studies described CBSIs as environments that equip participants with new skills that enable independence and empowerment. None of the findings from the three middle-income countries (South Africa, Brazil and India) contributed to this theme, as these interventions were geared towards offering peer support and increasing engagement in pleasurable activities among participants who were for the most part already quite self-sufficient, rather than seeking to increase the independence of older people. The strength of evidence that built this analytical theme varied (three assessed as being at low risk (30, 37, 38), five medium (20-22, 36, 41) and three high (18, 19, 43)).

Analytical Theme 4: CBSIs contributed to individual and community resilience

Emerging from eleven of the articles was the role of CBSIs as contributors to individual and community resilience. The 'Grandmothers against poverty and AIDS' initiative included workshops and psychological support groups (23), through which some participants learned new practical skills (sewing and gardening) that they could apply to manufacture handicrafts for sale (23). There was a higher number of studies that mentioned CBSIs' contributions to the dignity and self-respect of older persons, which in turn led to self-confidence and reliance on one's own abilities. Some of the CBSIs were also reported to have resulted in increased optimism and improved outlook on life in general. Three articles showed community level benefits in the form of social support. Ho et al (32) described how, through a peer counselling initiative which included retirees, a support network was formed leading to a feeling of "extended family". There was also a descriptive theme of feeling strong and not wanting to give up, describing a state of individual resilience that was linked to participating in various CBSIs.

The papers that helped build this theme also varied in strength of evidence (three studies assessed as low risk (30, 38, 39), three medium (21, 22, 42) and five high (13, 15, 19, 23, 32)).

Discussion

Our systematic review included 44 studies and showed that there is existing literature from which to draw limited lessons around CBSIs for healthy ageing in middle- and high-income countries. Most studies reported that the interventions had some positive impacts on the participants, but incomplete reporting and/or high risk of bias made these outcomes hard to interpret. CBSIs were also often poorly described, as were the participants. Exploratory meta-analysis was conducted for the outcomes of social support and reduction in depression, the two most commonly reported outcomes, and showed no difference in social support but a small reduction in depression. The interventions and outcomes, however, were too heterogeneous for these summary results to be generalizable. Furthermore, it is unclear

whether the identified lack of difference in social support was due to too few of the included studies reporting estimates of the measure of spread for both the intervention and control arms, thereby limiting the number of studies for which standardised mean differences could be calculated and included in the meta-analysis. The qualitative analysis highlighted that from the perspective of older people themselves, CBSIs may have the potential to impact either directly on improved health (physical and mental) or indirectly through enhanced wellbeing, increased social interaction and greater empowerment. It is notable, however, that few studies were considered to be of high quality. All included studies focused at the level of the individual, with little consideration of organizational factors and no analysis of cost-effectiveness. The only reporting of outcomes at organization or system level was on uptake of an influenza vaccination and eyesight tests. Furthermore, most of the studies came from high income settings, and nearly half (20/44) came from just two countries, the UK (9 studies) and USA (11 studies), which has implications for the generalizability of the findings. CBSIs have received attention because of their potential to lead to cost-effective scalable solutions and to filling gaps in vertical healthcare systems (4). Our review shows that the types of outcomes and areas of benefit being suggested are consistent with wider discourses around older people and healthy ageing (2). The evidence to support cost-effectiveness in relation to these, however, needs to be strengthened. There may be an inherent assumption, as in other areas of community provision of services, that CBSIs are cost saving to health and social care systems, but this may not be the case and it will be important to ascertain this through rigorous research, including consideration of wider societal costs (44).

There are also important questions to consider with regard to sustainability of CBSIs as a way of addressing gaps in current health and social systems. Recent examination of older people's associations across four countries (45), confirms previous research around CBSIs, that such initiatives should not be thought of as alternatives to health and social care services but that cooperation between a range of services and agencies will be important (4).

Overall, the systematic review of CBSIs highlights diversity in types of interventions. An overarching label such as ‘CBSI’ brings value if it can allow individual examples of innovation to be grouped in order to strengthen the inference that can be drawn from evaluations. As yet there is a lack of a conceptual framework that can help to advance this. There is, however, existing literature that can inform this. For example, more broadly in public health, the importance of making a distinction between ‘community-based’ and ‘community-level’ interventions has been made, with the former referring to interventions targeting individual-level change and the latter seeking community-wide change (46). The studies in our review show that most CBSIs are consistent with a ‘community-based’ approach, or at least that individual level outcomes were being used to evaluate the interventions. As mentioned above and shown in Tables 7 and 8, all included studies measured and reported individual level outcomes. Yet, the notion of ‘social innovation’ although underdeveloped in relation to health is more commonly associated with seeking to bring social change and a new way of doing things (47). The current definition of CBSIs also emphasizes social cohesion and inclusion, which may be more consistent with ‘community-level’. It is likely that CBSIs may exist on a continuum between these but understanding some of these underlying principles will help in the selection of appropriate outcomes, evaluation approach and future reviews of evidence.

Furthermore, CBSIs represent complex interventions that should be understood within particular social contexts. As such, evaluation approaches not identified through this systematic review, including realist or theory based approaches (48), may be valuable to understand the complex interactions between interventions, wider health and social care systems, and broader social and political contexts and to examine how these interactions affect the desired impact and outcomes. More broadly, reporting of CBSIs should be improved along the lines advocated for complex health interventions (49).

Strengths and Limitations of our Approach

To our knowledge, this is the first systematic review of CBSIs for all older people whatever their health status. The main strength of the review lies in its comprehensiveness. The search strategy was designed to be inclusive rather than exclusive and as such incorporated a large number of studies from both academic and grey literature. The exploratory meta-analyses highlight the difficulties of assessing numerical results in these interventions. The term 'community-based social innovation' is rarely used in the literature. Instead we used key underpinning criteria to identify potentially eligible studies, which required an element of judgement in deciding whether programmes constituted CBSIs. As a result, we may have missed eligible studies if the intervention description in the paper did not fully bring out issues of empowerment, self-efficacy and social cohesion. To compensate, we sifted through large numbers of full texts because abstracts tend not to be clear about these aspects of interventions. Further conceptual development of the term would be helpful in making these judgements. There were four studies (mainly dissertations) for which we were not able to access the full text, and it is not clear how these would have differed from the included studies. Finally, it is not clear whether the aforementioned country bias is indicative of a more mature research field in these countries, that more CBSIs are in place in these countries or whether our search has in some way skewed the results despite the inclusion of studies in any language. We know from other topic areas that nationally significant journals in middle-income countries may not be covered in international databases (50).

Conclusion

Community-based social innovations (CBSIs) offer a means to improve health and wellbeing among older people. The current reporting gives an insight into the types of outcomes that may be important for older people, but not the strength of evidence to reach conclusions on effectiveness or cost-effectiveness. There is very little reporting of outcomes at an organization or system level which means that there is limited understanding of the role of such initiatives within the broader health or social care system. There is a need to improve

the reporting of CBSIs as complex interventions and for improved conceptualization of these interventions to inform research and practice.

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Table 1: Summary of study inclusion/exclusion criteria

PICOS	Inclusion criteria	Exclusion criteria
Participants and setting	People aged 50 and over. Studies based in community settings in any high or middle-income countries (as defined by the World Bank (9)).	Studies where the mean age or age range was not given or where the mean age or mid-point of the age range was under 50 years old. Studies where the setting was a health-related establishment, such as nursing homes, hospitals, clinics, etc. Studies that considered only benefits for the caregivers. Studies in low-income countries.
Intervention	Any CBSIs or innovations to services or self-help initiatives that aimed to empower the target group by motivating them to take initiative for their own health and wellbeing. Innovations demonstrating some level of community engagement. Ideally innovations should be run by one or more people from the community themselves, who could be paid or volunteers. Running for at least 12 months at study end.	Interventions or innovations implemented solely by health service staff. Innovations without any community responsibility or community engagement. Interventions that lasted less than 12 months at study end.
Comparison	For quantitative studies: historical (i.e. before and after), and/or a concurrent comparator such as usual environment, waiting list or other CBSI. For qualitative studies: sufficient information reported about the context or situation prior to the innovation taking place (i.e. historical).	Studies where there was no comparison reported.
Outcome	Any clinical or person-centred measure of healthy ageing at the level of the individual citizen (e.g. wellbeing, quality of life, acceptability), CBSI organization (e.g. costs)	Biochemical or genetic outcome measures alone.

	or the health service (e.g. social care, hospital care)	
Study designs	Any quantitative or qualitative comparative study, including RCT, cohort, case-control, case series with historical control published from 2000 onwards.	Editorials, opinion pieces.

Table 2: Search strategies

Database or platform	Search strategy
Ovid MEDLINE(R)	1 elderly.mp. or aged/ (2670353) 2 "aged, 80 and over"/ or old age.mp. (750075) 3 geriatric.mp. or geriatrics/ (84093) 4 older.mp. (323003) 5 senior?.mp. (29933) 6 late-life.mp. (5093) 7 later life.mp. (7975) 8 aging/ or ag?ing.mp. (318225) 9 gerontolog$.mp. (5881) 10 retirement/ or retire$.mp. (19796) 11 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 (3096932) 12 health promotion/ or health/ or health.mp. or health status/ (2280745) 13 well being.mp. (51072) 14 wellbeing.mp. (8544) 15 (functional capacity or functional performance).mp. (13188) 16 "quality of life"/ (144521) 17 12 or 13 or 14 or 15 or 16 (2379146) 18 collaboration.mp. or cooperative behavior/ (80700) 19 scheme.mp. (74113) 20 project.mp. (131300) 21 enterpri#e.mp. (5718) 22 initiative.mp. (33718) 23 endeavo?r.mp. (6653) 24 partnership$.mp. (28244) 25 community.mp. (421350) 26 centre.mp. (106124) 27 center.mp. (341144) 28 senior centers/ (38) 29 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 (1126530)

	30 empower$.mp. (16929) 31 social intervention.mp. (250) 32 social support/ or social innovation.mp. (59331) 33 patient-centered care/ or people cent?red care.mp. (14003) 34 consumer participation/ or consumer advocacy/ (18303) 35 self care.mp. or self care/ (35336) 36 patient led.mp. (368) 37 social inclusion.mp. (696) 38 peer group/ or peer led.mp. or peer leader.mp. (16871) 39 self-help groups/ or peer support.mp. (10541) 40 group support.mp. (528) 41 community support.mp. (1548) 42 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 (160883) 43 11 and 17 and 29 and 42 (7746) 44 limit 43 to humans (7575) 45 limit 44 to "middle aged (45 plus years)" (6963) 46 limit 45 to yr="2000 - current" (5654)
Academic Search Complete	elderly or aged or geriatric* OR "senior citizen" or "late life" OR "later life" OR aging OR gerontolog* OR retire* AND "Health promotion" OR TI health or AB health OR "health status" OR "well being" OR wellbeing OR "functional capacity" OR "quality of life" OR “functional performance” AND TI collaboration AB Collaboration or "cooperative behavior" OR scheme OR TI project OR AB project OR enterprise OR TI initiative OR AB initiative OR endeavor OR endeavour OR partnership* OR TI center AB center OR KW center OR TI centre OR AB centre OR KW centre OR TI community OR AB community OR KW community AND

	Empower* OR "social intervention" OR "social support" OR "social innovation" OR "patient centered care" OR "people centered care" OR "consumer participation" OR "consumer advocacy" OR "self care" OR "patient led' or "social inclusion" OR "peer group" OR "peer led" OR "self help group" OR "peer support" OR "group support" OR "community support" OR "peer leader"
CINAHL	elderly or aged or geriatric* OR "senior citizen" or "late life" OR "later life" OR aging OR gerontolog* OR retire* AND "Health promotion" OR TI health or AB health OR "health status" OR "well being" OR wellbeing OR "functional capacity" OR "quality of life" OR “functional performance” AND TI collaboration AB Collaboration or "cooperative behavior" OR scheme OR TI project OR AB project OR enterprise OR TI initiative OR AB initiative OR endeavor OR endeavour OR partnership* OR TI center AB center OR TI centre OR AB centre OR TI community OR AB community AND Empower* OR "social intervention" OR "social support" OR "social innovation" OR "patient centered care" OR "people centered care" OR "consumer participation" OR "consumer advocacy" OR "self care" OR "patient led' or "social inclusion" OR "peer group" OR "peer led" OR "self help group" OR "peer support" OR "group support" OR "community support" OR "peer leader" AND SU aged Or middle aged
ERIC	elderly or aged or geriatric* OR "senior citizen" or "late life" OR "later life" OR aging OR gerontolog* OR retire* AND

	"Health promotion" OR TI health or AB health OR "health status" OR "well being" OR wellbeing OR "functional capacity" OR "quality of life" OR “functional performance” AND TI collaboration AB Collaboration or "cooperative behavior" OR scheme OR TI project OR AB project OR enterprise OR TI initiative OR AB initiative OR endeavor OR endeavour OR partnership* OR TI center AB center OR TI centre OR AB centre OR TI community OR AB community AND Empower* OR "social intervention" OR "social support" OR "social innovation" OR "patient centered care" OR "people centered care" OR "consumer participation" OR "consumer advocacy" OR "self care" OR "patient led' or "social inclusion" OR "peer group" OR "peer led" OR "self help group" OR "peer support" OR "group support" OR "community support" OR "peer leader"
PsycInfo	elderly or aged or geriatric* OR "senior citizen" or "late life" OR "later life" OR aging OR gerontolog* OR retire* AND "Health promotion" OR TI health or AB health OR "health status" OR "well being" OR wellbeing OR "functional capacity" OR "quality of life" OR “functional performance” AND TI collaboration AB Collaboration or "cooperative behavior" OR scheme OR TI project OR AB project OR enterprise OR TI initiative OR AB initiative OR endeavor OR endeavour OR partnership* OR TI center AB center OR TI centre OR AB centre OR TI community OR AB community AND Empower* OR "social intervention" OR "social support" OR "social innovation" OR "patient centered care" OR "people centered care" OR "consumer participation" OR "consumer

	advocacy" OR "self care" OR "patient led' or "social inclusion" OR "peer group" OR "peer led" OR "self help group" OR "peer support" OR "group support" OR "community support" OR "peer leader" AND Limited to: Aged or Middle Aged
Social Sciences Abstracts	elderly or aged or geriatric* OR "senior citizen" or "late life" OR "later life" OR aging OR gerontolog* OR retire* AND "Health promotion" OR TI health or AB health OR "health status" OR "well being" OR wellbeing OR "functional capacity" OR "quality of life" OR “functional performance” AND TI collaboration AB Collaboration or "cooperative behavior" OR scheme OR TI project OR AB project OR enterprise OR TI initiative OR AB initiative OR endeavor OR endeavour OR partnership* OR TI center AB center OR TI centre OR AB centre OR TI community OR AB community AND Empower* OR "social intervention" OR "social support" OR "social innovation" OR "patient centered care" OR "people centered care" OR "consumer participation" OR "consumer advocacy" OR "self care" OR "patient led' or "social inclusion" OR "peer group" OR "peer led" OR "self help group" OR "peer support" OR "group support" OR "community support" OR "peer leader"
Embase	elderly or aged or geriatric* OR "senior citizen" or "late life" OR "later life" OR aging OR gerontolog* OR retire* AND "Health promotion" OR health:ti,ab OR "health status" OR "well being" OR wellbeing OR "functional capacity" OR "quality of life" OR “functional performance” AND

	collaboration:ti,ab or "cooperative behavior" OR scheme OR project:ti,ab OR enterprise OR initiative:ti,ab OR endeavor OR endeavour OR partnership* OR center:ti,ab OR centre:ti,ab OR community:ti,ab AND Empower* OR "social intervention" OR "social support" OR "social innovation" OR "patient centered care" OR "people centered care" OR "consumer participation" OR "consumer advocacy" OR "self care" OR "patient led' or "social inclusion" OR "peer group" OR "peer led" OR "self help group" OR "peer support" OR "group support" OR "community support" OR "peer leader" AND Limits: Middle aged, aged, very elderly removed conference abstracts
PAIS	elderly OR aged OR geriatric* OR "senior citizen" OR "late life" OR "later life" OR aging OR gerontolog* OR retire* AND "Health promotion" OR health OR "health status" OR "well being" OR wellbeing OR "functional capacity" OR "quality of life" OR "functional performance" AND Collaboration OR "cooperative behavior" OR scheme OR project OR enterprise OR initiative OR endeavor OR endeavour OR partnership* OR center OR centre OR community AND empower* OR "social intervention" OR "social support" OR "social innovation" OR "patient centered care" OR "peopled centered care" OR "consumer participation" OR "consumer advocacy" OR "self care" OR "patient led" OR "social inclusion" OR "peer group" OR "peer led" OR "self help group" OR "peer support" OR "group support" OR "community support" OR "peer leader"

Web of Science	elderly OR aged OR geriatric* OR "senior citizen" OR "late life" OR "later life" OR aging OR gerontolog* OR retire* AND "Health promotion" OR "health status" OR "well being" OR wellbeing OR "functional capacity" OR "quality of life" OR "functional performance" – (removed singular "health" – can add back in – was just retrieving too many citations) AND Collaboration OR "cooperative behavior" OR scheme OR project OR enterprise OR initiative OR endeavor OR endeavour OR partnership* OR center OR centre OR community AND empower* OR "social intervention" OR "social support" OR "social innovation" OR "patient centered care" OR "peopled centered care" OR "consumer participation" OR "consumer advocacy" OR "self care" OR "patient led" OR "social inclusion" OR "peer group" OR "peer led" OR "self help group" OR "peer support" OR "group support" OR "community support" OR "peer leader"
Scopus	elderly OR aged OR geriatric* OR "senior citizen" OR "late life" OR "later life" OR aging OR gerontolog* OR retire* AND "Health promotion" OR "health status" OR "well being" OR wellbeing OR "functional capacity" OR "quality of life" OR "functional performance" – (removed singular "health") AND Collaboration OR "cooperative behavior" OR scheme OR project OR enterprise OR initiative OR endeavor OR endeavour OR partnership* OR center OR centre OR community AND empower* OR "social intervention" OR "social support" OR "social innovation" OR "patient centered care" OR "peopled centered care" OR "consumer participation" OR "consumer

	advocacy" OR "self care" OR "patient led" OR "social inclusion" OR "peer group" OR "peer led" OR "self help group" OR "peer support" OR "group support" OR "community support" OR "peer leader"
Policy File	elderly OR aged OR geriatric* OR "senior citizen" OR "late life" OR "later life" OR aging OR gerontolog* OR retire* AND "Health promotion" OR health OR "health status" OR "well being" OR wellbeing OR "functional capacity" OR "quality of life" OR "functional performance" AND Collaboration OR "cooperative behavior" OR scheme OR project OR enterprise OR initiative OR endeavor OR endeavour OR partnership* OR center OR centre OR community AND empower* OR "social intervention" OR "social support" OR "social innovation" OR "patient centered care" OR "peopled centered care" OR "consumer participation" OR "consumer advocacy" OR "self care" OR "patient led" OR "social inclusion" OR "peer group" OR "peer led" OR "self help group" OR "peer support" OR "group support" OR "community support" OR "peer leader"
Sociological Abstracts	elderly OR aged OR geriatric* OR "senior citizen" OR "late life" OR "later life" OR aging OR gerontolog* OR retire* AND "Health promotion" OR health OR "health status" OR "well being" OR wellbeing OR "functional capacity" OR "quality of life" OR "functional performance" AND Collaboration OR "cooperative behavior" OR scheme OR project OR enterprise OR initiative OR endeavor OR endeavour OR partnership* OR center OR centre OR community AND

	empower* OR "social intervention" OR "social support" OR "social innovation" OR "patient centered care" OR "peopled centered care" OR "consumer participation" OR "consumer advocacy" OR "self care" OR "patient led" OR "social inclusion" OR "peer group" OR "peer led" OR "self help group" OR "peer support" OR "group support" OR "community support" OR "peer leader"
JSTOR	(((ab:(elderly OR aged) AND ab:("Health promotion" OR health)) AND ab:(Collaboration OR "cooperative behavior")) AND ab:(empower* OR "social intervention")) = 0 (((ab:(elderly OR aged) AND ab:("well being" OR wellbeing OR "functional capacity")) AND ab:(scheme OR project OR enterprise)) AND ab:("social support" OR "social innovation" OR "patient centered care")) = 0 (((ab:(elderly OR aged) AND ab:("quality of life" OR "functional performance")) AND ab:(initiative OR endeavor OR endeavour)) AND ab:("consumer participation" OR "consumer advocacy" OR "self care" OR "patient led")) = 0
Advanced Google Search: https://www.google.com/advanced_search	all these words: older people this exact word or phrase: project any of these words: health domain: .org file type: .pdf Older people health “project” site:.org filetype:pdf elderly health "project" site:.org filetype:pdf elderly health self-led "project" site:.org filetype:pdf elderly wellbeing peer-led "project" site:.org filetype:pdf
ClinicalTrials.gov	Search: elderly wellbeing project community social intervention

Table 3: Articles excluded after full text assessment

No.	Paper excluded after full text review	Reason for exclusion
1.	Aday, R. H. and G. Kehoe (2008). "Working in Old Age: Benefits of Participation in the Senior Community Service Employment Program." Journal of Workplace Behavioral Health 23(1/2): 125-145.	Not a community based participant empowerment intervention
2.	Andrew, A. and L. H. Wilson (2014). "A cafe on the premises of an aged care facility: more than just froth?" Scandinavian journal of occupational therapy 21(3): 219-226.	Not a community setting
3.	Anetzberger, G. J. (2010). "Community Options of Greater Cleveland, Ohio: preliminary evaluation of a naturally occurring retirement community program." Clinical Gerontologist 33(1): 1-15.	No comparator
4.	Alves, H. V. D. (2013). Dancing and the aging brain: The effects of a 4-month ballroom dance intervention on the cognition of healthy older adults. Ann Arbor, University of Illinois at Urbana-Champaign. 3603349: 101.	Intervention was too short
5.	Atkins, S. and Simmons (2013). "We're Better Together: The Gifts, Responsibilities, and Joys of Aging in Community." Generations 37(4): 92-96.	No intervention/intervention not clear
6.	Balick, M. J. and R. Lee (2003). "The power of community." Alternative therapies in health and medicine 9(1): 100-103.	No intervention/intervention not clear
7.	Bartels, S. J., et al. (2013). "Activating older adults with serious mental illness for collaborative primary care visits." Psychiatric rehabilitation journal 36(4): 278-288.	Intervention was too short
8.	Bartsch, D. A., et al. (2013). "Outcomes of senior reach gatekeeper referrals: comparison of the Spokane gatekeeper program, Colorado Senior Reach, and Mid-Kansas Senior Outreach." Care management journals :	Not a community based participant empowerment intervention

	Journal of case management ; The journal of long term home health care 14(1): 11-20.	
9.	Baur, V. E., et al. (2013). "Pioneering partnerships: Resident involvement from multiple perspectives." Journal of aging studies 27(4): 358-367.	Not a community setting
10.	Becofsky, K., et al. (2014). "Psychosocial mediators of two community-based physical activity programs." Annals of behavioral medicine : a publication of the Society of Behavioral Medicine 48(1): 125-129.	No usable outcomes
11.	Behm, L., et al. (2013). "Multi-professional and multi-dimensional group education--a key to action in elderly persons." Disability and rehabilitation 35(5): 427-435.	Not a community based participant empowerment intervention
12.	Berg-Warman, A. and J. Brodsky (2006). "The supportive community: a new concept for enhancing the quality of life of elderly living in the community." Journal of aging & social policy 18(2): 69-83.	No outcome measure
13.	Bier, N., et al. (2015). "Jog Your Mind: methodology and challenges of conducting evaluative research in partnership with community organizations." International psychogeriatrics / IPA 27(1): 79-94.	No usable outcomes
14.	Bonifas, R. P., et al. (2013). "Evidence of empowerment in resident council groups: an examination of two leadership models in assisted living." Journal of gerontological social work 56(4): 281-298.	Not a community based participant empowerment intervention
15.	Buman, M. P., et al. (2011). "Peer volunteers improve long-term maintenance of physical activity with older adults: a randomized controlled trial." Journal of physical activity & health 8 Suppl 2: S257-266.	Intervention was too short
16.	Camic, P. M., et al. (2013). "Does a 'Singing Together Group' improve the quality of life of people with a dementia and their carers? A pilot evaluation study." Dementia: The International Journal of Social Research and Practice 12(2): 157-176.	Intervention was too short
17.	Camic, P. M., et al. (2014). "Viewing and making art together: a multi-	Intervention was too

	session art-gallery-based intervention for people with dementia and their carers." Aging & mental health 18(2): 161-168.	short
18.	Chan, A. C.-M. and T. Cao (2015). "Age-Friendly Neighbourhoods as Civic Participation: Implementation of an Active Ageing Policy in Hong Kong." Journal of Social Work Practice 29(1): 53-68.	No outcome measure
19.	Chapin, R. K., et al. (2013). "Reclaiming joy: pilot evaluation of a mental health peer support program for older adults who receive Medicaid." The Gerontologist 53(2): 345-352.	Intervention was too short
20.	Cheadle, A., et al. (2010). "Promoting sustainable community change in support of older adult physical activity: evaluation findings from the Southeast Seattle Senior Physical Activity Network (SESPAN)." Journal of urban health : bulletin of the New York Academy of Medicine 87(1): 67-75.	No outcome measure
21.	Chesler, J., et al. (2015). "The effects of playing Nintendo Wii on depression, sense of belonging and social support in Australian aged care residents: a protocol study of a mixed methods intervention trial." BMC geriatrics 15: 106.	Not a community setting
22.	Clark, M., et al. (2015). "Sporting memories & the social inclusion of older people experiencing mental health problems." Mental Health and Social Inclusion 19(4): 202-211.	No outcome measure
23.	Cleghorn, G. D., et al. (2008). "Educating and Empowering Elders: Improving the Health of Senior Latino Diabetics through Community Collaboration." Journal of Health Disparities Research & Practice 2(2): 1-16.	Intervention was too short
24.	Cohen-Mansfield, J. and B. Jensen (2006). "Do interventions bringing current self-care practices into greater correspondence with those performed premorbidly benefit the person with dementia? A pilot study." American	Not a community setting

	journal of Alzheimer's disease and other dementias 21(5): 312-317.	
25.	Collins, C. C. and J. Benedict (2006). "Evaluation of a community-based health promotion program for the elderly: lessons from Seniors CAN." American journal of health promotion : AJHP 21(1): 45-48.	Intervention was too short
26.	Combinato, D. S., et al. (2010). ""Conversation groups": Health of the elderly in the family health strategy." Psicologia e Sociedade 22(3): 558-568.	No numbers of participants in evaluation
27.	Conklin, J., et al. (2011). "Knowledge-to-action processes in SHRTN collaborative communities of practice: a study protocol." Implementation science : IS 6: 12.	No intervention/intervention not clear
28.	Connor, M. (2000). "Recreational folk dance: a multicultural exercise component in healthy ageing." Australian occupational therapy journal 47(2): 69-76.	No numbers of participants in evaluation
29.	Cruikshank, K. (2013). "The Community Partners Program: A Small Minnesota Town Creates Community for Frail Elders." Generations 37(4): 62-64.	No outcome measure
30	Dalziel, R. and M. Willis (2015). "Capacity building with older people through local authority and third-sector partnerships." Ageing & Society 35(2): 428-449.	No outcome measure
31.	DeMarco, R. F. and K. Chan (2013). "The Sistah Powah structured writing intervention: a feasibility study for aging, low-income, HIV-positive Black women." American journal of health promotion : AJHP 28(2): 108-118.	Intervention was too short
32.	de la Luz Martinez-Maldonado, M., et al. (2007). "Program of active aging in a rural Mexican community: a qualitative approach." BMC public health 7: 276.	Intervention was too short
33.	Deery, H. A., Day, L. M. and Fildes, B. 2000. An impact evaluation of a	Intervention not CBSI

	falls prevention program among older people. Accident Analysis and Prevention, 32, 3, 427–33.	
34.	Demski, H., et al. (2012). "Technical requirements of a social networking platform for senior citizens." Studies in health technology and informatics 180: 818-822.	No outcome measure
35.	Dierich, M. (2007). "Adventures in health care: designing a wellness center for low-income elders." Urologic nursing 27(5): 403-409.	No outcome measure
36.	Dow, B., et al. (2011). "Evaluation of Alzheimer's Australia Vic Memory Lane Cafes." International psychogeriatrics / IPA 23(2): 246-255.	No comparator
37.	Eksell, B.-M. S. (2015). Creativity as a Means of Expression of Emotions by Older Adults. Ann Arbor, Walden University. 3733483: 182.	Intervention was too short
38.	Fahey, K. L. (2016). Physical Activity Improves Depressive Symptoms in Older Adults. Ann Arbor, Walden University. 10140038: 115.	Not a community based participant empowerment intervention
39.	Fang, M. L., et al. (2016). "Place-making with older persons: Establishing sense-of-place through participatory community mapping workshops." Social Science & Medicine 168: 223-229.	No usable outcomes
40	Fisher, K. J. and F. Li (2004). "A community-based walking trial to improve neighborhood quality of life in older adults: a multilevel analysis." Annals of behavioral medicine : a publication of the Society of Behavioral Medicine 28(3): 186-194.	Intervention was too short
41.	Fisher EB, Boothroyd RI, Coufal MM, et al. (2012) Peer support for selfmanagement of diabetes improved outcomes in international settings. Health Aff (Millwood);31(1):130-139.	Intervention too short
42.	Forster, S. (2009). "Relatives as Parents Program of the Pinebelt Association for Families." Journal of Intergenerational Relationships 7(2-3): 318-321.	No outcome measure

43.	Fortune, T., et al. (2007). "Older consumers' participation in the planning and delivery of mental health care: A collaborative service development project." Australian occupational therapy journal 54(1): 70-74.	No outcome measure
44.	Foy, C. G., et al. (2013). "Incorporating prosocial behavior to promote physical activity in older adults: rationale and design of the Program for Active Aging and Community Engagement (PACE)." Contemporary clinical trials 36(1): 284-297.	No usable outcomes
45.	Fruhauf, C. A., et al. (2012). "Larimer County Alliance for Grandfamilies: A Collaborative Approach to Meeting a Community Need." Journal of Applied Gerontology 31(2): 193-214.	No usable outcomes
46.	Fulbright, S. A. (2010). "Rates of depression and participation in senior centre activities in community-dwelling older persons." Journal of psychiatric and mental health nursing 17(5): 385-391.	Not a community based participant empowerment intervention
47.	Gammonley, D. (2009). "Psychological well-being and social support among elders employed as lay helpers." Journal of gerontological social work 52(1): 64-80.	No outcome measure
48.	Goldsilver, P. M. and M. R. Gruneir (2001). "Early stage dementia group: an innovative model of support for individuals in the early stages of dementia." American journal of Alzheimer's disease and other dementias 16(2): 109-114.	No usable outcomes
49.	Gori, C. (2003). Community care for the elderly in Lombardy. Needs, resources and outcomes. Ann Arbor, London School of Economics and Political Science (United Kingdom). U615467: 249.	Not a specific intervention
50.	Hanson, D. and C. A. Emlet (2006). "Assessing a community's elder friendliness: a case example of The AdvantAge Initiative." Family & community health 29(4): 266-278.	No usable outcomes
51.	Hawkins, J. L., et al. (2011). "Allotment Gardening and Other Leisure	Duration of intervention

	Activities for Stress Reduction and Healthy Aging." Horttechnology 21(5): 577-585.	is unclear
52.	Hassink, J., et al. (2010). "Care farms in the Netherlands: attractive empowerment-oriented and strengths-based practices in the community." Health & place 16(3): 423-430.	No usable outcomes
53.	Heckman, T. G., et al. (2001). "A pilot coping improvement intervention for late middle-aged and older adults living with HIV/AIDS in the USA." AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV 13(1): 129-139.	Intervention was too short
54.	Heisler M, Vijan S, Makki F, Piette JD. (2010) Diabetes control with reciprocal peer support versus nurse care management: a randomized trial. Ann Intern Med.;153(8):507-515	Intervention too short
55.	Hewitt, G., et al. (2013). "Using participatory approaches with older people in a residential home in Guyana: challenges and tensions." Journal of cross-cultural gerontology 28(1): 1-25.	Not a community setting
56.	Hyland, R. M., et al. (2006). "Peer educators' perceptions of training for and implementing a community-based nutrition intervention for older adults." Journal of nutrition for the elderly 25(3-4): 147-171.	Not a community setting
57.	Hoban, S. (2003). "Positive PEER Pressure." Nursing Homes: Long Term Care Management 52(10): 41-42.	No usable outcomes
58.	Holmes, W. R. and J. Joseph (2011). "Social participation and healthy ageing: a neglected, significant protective factor for chronic non communicable conditions." Globalization and Health 7.	No numbers of participants in evaluation
59.	Hanson, D. and C. A. Emlet (2006). "Assessing a community's elder friendliness: a case example of The AdvantAge Initiative." Family & community health 29(4): 266-278.	No usable outcomes
60.	Hassink, J., et al. (2010). "Care farms in the Netherlands: attractive	No usable outcomes

	empowerment-oriented and strengths-based practices in the community." Health & place 16(3): 423-430.	
61.	Heckman, T. G., et al. (2001). "A pilot coping improvement intervention for late middle-aged and older adults living with HIV/AIDS in the USA." AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV 13(1): 129-139.	Intervention was too short
62.	Hewitt, G., et al. (2013). "Using participatory approaches with older people in a residential home in Guyana: challenges and tensions." Journal of cross-cultural gerontology 28(1): 1-25.	Not a community setting
63.	Hyland, R. M., et al. (2006). "Peer educators' perceptions of training for and implementing a community-based nutrition intervention for older adults." Journal of nutrition for the elderly 25(3-4): 147-171.	Not a community setting
64.	Hoban, S. (2003). "Positive PEER Pressure." Nursing Homes: Long Term Care Management 52(10): 41-42.	No usable outcomes
65.	Holmes, W. R. and J. Joseph (2011). "Social participation and healthy ageing: a neglected, significant protective factor for chronic non communicable conditions." Globalization and Health 7.	No numbers of participants in evaluation
66.	Kaur, R. (2006). "Partnerships for Older People projects: 'developing services to engage, enable and empower older people'." Working with Older People: Community Care Policy & Practice 10(3): 28-30.	No usable outcomes
67.	Lally E (2009) 'The power to heal us with a smile and a song': senior well-being, music-based participatory arts and the value of qualitative evidence. Journal of Arts and Community 1(1): 25-44	Intervention too short
68.	Lawrence, A. R. and A. R. S. Schigelone (2002). "Reciprocity beyond Dyadic Relationships: Aging-Related Communal Coping." Research on aging 24(6): 684-704.	Not a community setting
69.	Leahey, A. and J. F. Singleton (2011). "Utilizing Therapeutic Recreation to	Intervention was too

	Empower Persons with Alzheimer's in a Day Center." Therapeutic Recreation Journal 45(2): 135-146.	short
70	Lebron, C. N., et al. (2015). "Tales from the Miami Healthy Heart Initiative: The Experiences of Two Community Health Workers." Journal of Health Care for the Poor & Underserved 26(2): 453-462.	Median age was unclear
71.	Lee, A. H., et al. (2010). "How to analyze longitudinal multilevel physical activity data with many zeros?" Preventive medicine 51(6): 476-481.	Intervention was too short
72.	Lee, C. Y. and Y. H. Cho (2012). "Evaluation of a community health practitioner self-care program for rural Korean patients with osteoarthritis." Journal of Korean Academy of Nursing 42(7): 965-973.	Intervention was too short
73.	Lee, C. Y., et al. (2015). "Evaluation of a support worker role, within a nurse delegation and supervision model, for provision of medicines support for older people living at home: the Workforce Innovation for Safe and Effective (WISE) Medicines Care study." BMC health services research 15: 460.	Not a community based participant empowerment intervention
74.	Leeman, J., et al. (2008). "Tailoring a diabetes self-care intervention for use with older, rural African American women." The Diabetes educator 34(2): 310-317.	Intervention was too short
75.	Lehto, P. (2013). "Interactive CaringTV® supporting elderly living at home." Australasian Medical Journal 6(8): 425-429.	No comparator
76.	Leutz, W. N., et al. (2001). "A limited entitlement for community care: how members use services." Journal of aging & social policy 12(3): 43-64.	Not a community based participant empowerment intervention
77.	Levasseur, M., et al. (2016). "Personalized citizen assistance for social participation (APIC): A promising intervention for increasing mobility, accomplishment of social activities and frequency of leisure activities in older adults having disabilities." Archives of gerontology and geriatrics 64: 96-	Intervention was too short

	102.	
78.	Levy, C. E., et al. (2015). "Effects of physical therapy delivery via home video telerehabilitation on functional and health-related quality of life outcomes." Journal of Rehabilitation Research & Development 52(3): 361-369.	Not a community based participant empowerment intervention
79.	Lezwijn, J., et al. (2011). "Neighbors Connected: the interactive use of multi-method and interdisciplinary evidence in the development and implementation of neighbors connected." Global health promotion 18(1): 27-30.	No outcome measure
80.	Lindsay, E. (2000). "Leg clubs: A new approach to patient-centred leg ulcer management." Nursing & health sciences 2(3): 139-141.	Not a community based participant empowerment intervention
81.	Lindsay, E. (2001). "Compliance with science: benefits of developing community leg clubs." British journal of nursing (Mark Allen Publishing) 10(22 Suppl): S66-Passim.	Not a community based participant empowerment intervention
82.	Lindsay, S., et al. (2007). "Tackling the digital divide: Exploring the impact of ICT on managing heart conditions in a deprived area." Information, Communication & Society 10(1): 95-114.	Intervention was too short
83.	Locher, J. L., et al. (2011). "A theoretically based Behavioral Nutrition Intervention for Community Elders at high risk: the B-NICE randomized controlled clinical trial." Journal of nutrition in gerontology and geriatrics 30(4): 384-402.	Intervention was too short
84.	LoGiudice, D. C., et al. (2012). "Lungurra Ngoora--a pilot model of care for aged and disabled in a remote Aboriginal community--can it work?" Rural and remote health 12: 2078.	No outcome measure
85.	Lowenstein, A. (2000). "A case management demonstration project for the frail elderly in Israel." Care management journals : Journal of case	Not a community based participant empowerment

	management ; The journal of long term home health care 2(1): 5-14.	intervention
86.	Luger, E., et al. (2016). "Effects of a Home-Based and Volunteer-Administered Physical Training, Nutritional, and Social Support Program on Malnutrition and Frailty in Older Persons: A Randomized Controlled Trial." Journal of the American Medical Directors Association 17(7): 671.e679-671.e616.	Intervention was too short
87.	Luzinski, C. H., et al. (2008). "The community case management program: for 12 years, caring at its best." Geriatric nursing (New York, N.Y.) 29(3): 207-215.	Not a community based participant empowerment intervention
88.	Lydon, H. (2007). "Community matrons - a conduit for integrated working?" Journal of Integrated Care 15(6): 6-13.	Not a community based participant empowerment intervention
89.	Lyssenko, L., et al. (2015). "Life Balance - a mindfulness-based mental health promotion program: conceptualization, implementation, compliance and user satisfaction in a field setting." BMC public health 15.	Not meeting age criteria
90.	Macintosh, E. A. (2013). "'Make Every Moment Count' in care for older people." Working with Older People: Community Care Policy & Practice 17(3): 125-129.	Not a community based participant empowerment intervention
91.	Mackay Yarnal, C. (2006). "The Red Hat Society: Exploring the role of play, liminality, and communitas in older women's lives." Journal of women & aging 18(3): 51-73.	No outcomes of interest
92.	Mackean, R. and J. Abbott-Chapman (2012). "Older people's perceived health and wellbeing: The contribution of peer-run community-based organisations." Health Sociology Review 21(1): 47-57.	No clear intervention
93.	Mackett, R. (2013). "Impact of Concessionary Bus Travel on the Well-Being of Older and Disabled People." Transportation Research Record(2352): 114-119.	No intervention/intervention not clear

94.	Magee, J. J. (2002). "A paradoxical model empowering reminiscence group members to transcend physical impediments to participation." Activities, Adaptation & Aging 27(2): 71-77.	Intervention was too short
95.	Mahendra, N. and S. Arkin (2003). "Effects of four years of exercise, language, and social interventions on Alzheimer discourse." Journal of Communication Disorders 36(5): 395-422.	Not a community based participant empowerment intervention
96.	Mahoney, D. M. F., et al. (2008). "Real world implementation lessons and outcomes from the Worker Interactive Networking (WIN) project: workplace-based online caregiver support and remote monitoring of elders at home." Telemedicine journal and e-health : the official journal of the American Telemedicine Association 14(3): 224-234.	No comparator
97.	Maki, Y., et al. (2012). "Effects of intervention using a community-based walking program for prevention of mental decline: a randomized controlled trial." Journal of the American Geriatrics Society 60(3): 505-510.	Intervention was too short
98.	Manavi, N. and H. Abedi (2016). "Investigating the effect of an empowerment program on physical activity of the elderly in Rezaeian Health Center, Iran, in 2014." Iranian Journal of Nursing & Midwifery Research 21(4): 345-350.	Intervention was too short
99.	Mandel, S. E., et al. (2013). "Effects of music therapy and music-assisted relaxation and imagery on health-related outcomes in diabetes education: a feasibility study." The Diabetes educator 39(4): 568-581.	Not a community setting
100	Marchinko, S. and D. Clarke (2011). "The Wellness Planner: empowerment, quality of life, and continuity of care in mental illness." Archives of psychiatric nursing 25(4): 284-293.	Intervention was too short
101	Marek, K. D. and M. J. Rantz (2000). "Aging in place: a new model for long-term care." Nursing administration quarterly 24(3): 1-11.	No outcome measure
102	Markle-Reid, M., et al. (2006). "Health promotion for frail older home	Intervention was too

	care clients." Journal of advanced nursing 54(3): 381-395.	short
103	Marsden, D., et al. (2010). "A multidisciplinary group programme in rural settings for community-dwelling chronic stroke survivors and their carers: a pilot randomized controlled trial." Clinical rehabilitation 24(4): 328-341.	Intervention was too short
104	Marshall, D. A., et al. (2009). "Achievement of Heart Health Characteristics Through Participation in an Intensive Lifestyle Change Program (Coronary Artery Disease Reversal Study)." Journal of cardiopulmonary rehabilitation and prevention 29(2): 84-94.	Not a community based participant empowerment intervention
105	Martin, A., et al. (2016). "Consumer perspectives of a community paramedicine program in rural Ontario." Australian Journal of Rural Health 24(4): 278-283.	Not a community based participant empowerment intervention
106	Martin-Matthews, A. and J. Sims-Gould (2008). "Employers, home support workers and elderly clients: identifying key issues in delivery and receipt of home support." Healthcare quarterly (Toronto, Ont.) 11(4): 69-75.	No usable outcomes
107	Martínez-Maldonado M, Correa-Muñoz E, Mendoza-Núñez VM (2007): Program of active aging in a rural Mexican community: a qualitative approach. BMC Public Health; 7:276	Unclear intervention duration
108	Marutani, M. and M. Miyazaki (2010). "Culturally sensitive health counseling to prevent lifestyle-related diseases in Japan." Nursing & health sciences 12(3): 392-398.	Intervention was too short
109	Massaro, E. and N. Claiborne (2001). "Effective strategies for reaching high-risk minorities with diabetes." The Diabetes educator 27(6): 820-828.	Not meeting age criteria
110	Matchim, Y., et al. (2008). "IOS New Scholar paper: a qualitative study of participants' perceptions of the effect of mindfulness meditation practice on self-care and overall well-being." Self-Care, Dependent-Care & Nursing	Not meeting age criteria

	16(2): 46-53.	
111	Matuska, K., et al. (2003). "Outcomes of a pilot occupational therapy wellness program for older adults." The American journal of occupational therapy : official publication of the American Occupational Therapy Association 57(2): 220-224.	Intervention was too short
112	Mazo, G. Z., et al. (2011). "Association between participation in community groups and being more physically active among older adults from Florianópolis, Brazil." Clinics 66(11): 1861-1866.	No intervention/intervention not clear
113	Mbah, O., et al. (2015). "Mobilizing social support networks to improve cancer screening: the COACH randomized controlled trial study design." BMC cancer 15: 907.	Intervention was too short
114	McAiney, C. A., et al. (2012). "'Throwing a lifeline: The role of first link™ in enhancing support for individuals with dementia and their caregivers." Neurodegenerative Disease Management 2(6): 623-638.	No usable outcomes
115	McCaskill, G. M., et al. (2016). "Development and validation of a diabetes self-management instrument for older African-Americans." Social work in health care 55(5): 381-394.	No intervention/intervention not clear
116	McDonald, R. M. and P. J. Brown (2008). "Exploration of social support systems for older adults: a preliminary study." Contemporary nurse 29(2): 184-194.	Intervention was too short
117	McKay, H. G., et al. (2002). "Internet-based diabetes self-management and support: Initial outcomes from the diabetes network project." Rehabilitation psychology 47(1): 31-48.	Intervention was too short
118	McKeever, C., et al. (2004). "Wellness Within REACH: mind, body, and soul: a no-cost physical activity program for African Americans in Portland, Oregon, to combat cardiovascular disease." Ethnicity & disease 14(3 Suppl 1): S93-101.	Intervention was too short

119	McVicker, S., et al. (2009). "The Communication Partner Scheme: A project to develop long-term, low-cost access to conversation for people living with aphasia." Aphasiology 23(1): 52-71.	Intervention was too short
120	Meethien, N., et al. (2011). "Effectiveness of nutritional education in promoting healthy eating among elders in northeastern Thailand." Pacific Rim International Journal of Nursing Research 15(3): 188-201.	Intervention was too short
121	Meiland, F. J. M., et al. (2014). "Participation of end users in the design of assistive technology for people with mild to severe cognitive problems; the European Rosetta project." International psychogeriatrics / IPA 26(5): 769-779.	Not a community based participant empowerment intervention
122	Melchior, M. A., et al. (2014). "Intermediate outcomes of chronic disease self-management program offered by members of the Healthy Aging Regional Collaborative in South Florida." Research on aging 36(4): 431-449.	Intervention was too short
123	Middling, S., et al. (2011). "Gardening and the social engagement of older people." Working with Older People: Community Care Policy & Practice 15(3): 112-122.	No numbers of participants in evaluation
124	Miller, P. A. and D. Butin (2000). "The role of occupational therapy in dementia—C.O.P.E. (Caregiver Options for Practical Experiences)." International journal of geriatric psychiatry 15(1): 86-89.	No numbers of participants in evaluation
125	Milligan, C., et al. (2004). "'Cultivating health': Therapeutic landscapes and older people in northern England." Social Science and Medicine 58(9): 1781-1793.	Duration of intervention unclear
126	Minardi, H. A. and M. Blanchard (2004). "Older people with depression: pilot study." Journal of advanced nursing 46(1): 23-32.	No comparator
127	Moffitt, R. and P. Mohr (2015). "The efficacy of a self-managed Acceptance and Commitment Therapy intervention DVD for physical activity	Intervention was too short

	initiation." British journal of health psychology 20(1): 115-129.	
128	Moody, E. and A. Phinney (2012). "A community-engaged art program for older people: fostering social inclusion." Canadian journal on aging = La revue canadienne du vieillissement 31(1): 55-64.	Intervention was too short
129	Moreno-John, G., et al. (2007). "Mentoring in community-based participatory research: the RCMAR experience." Ethnicity & disease 17(1 Suppl 1): S33-43.	No numbers of participants in evaluation
130	Mountain, G. A., et al. (2014). "'Putting Life in Years' (PLINY) telephone friendship groups research study: pilot randomised controlled trial." Trials 15.	Intervention was too short
131	Mui, A., et al. (2013). "Developing an Older Adult Volunteer Program in a New York Chinese Community: An Evidence-Based Approach." Ageing International 38(2): 108-121.	Intervention was too short
132	Munro, F. and S. Muirhead (2015). "Homeward Bound: Co-Designing the Pathway from Hospital to Home for Older People." International Journal of Integrated Care (IJIC) 15: 1-2.	No usable outcomes
133	Ndirangu, M., et al. (2008). "Community-academia partnerships to promote nutrition in the Lower Mississippi Delta: Community members' perceptions of effectiveness, barriers, and factors related to success." Health promotion practice 9(3): 237-245.	No usable outcomes
134	Nevins, R., et al. (2013). "The Saratoga WarHorse project: a case study of the treatment of psychological distress in a veteran of Operation Iraqi Freedom." Advances in mind-body medicine 27(4): 22-25.	Not a community based participant empowerment intervention
135	Newall, N. E. G. and V. H. Menec (2015). "Targeting Socially Isolated Older Adults: A Process Evaluation of the Senior Centre Without Walls Social and Educational Program." Journal of applied gerontology : the official journal of the Southern Gerontological Society 34(8): 958-976.	Not a community based participant empowerment intervention

136	Newell, J. M., et al. (2009). "Creating a supportive environment for living with stroke in rural areas: two low-cost community-based interventions." Topics in stroke rehabilitation 16(2): 147-156.	Not a community based participant empowerment intervention
137	Nicholson Jr, N. R. and J. Shellman (2013). "Decreasing Social Isolation in Older Adults." Research in gerontological nursing 6(2): 89-97.	Intervention was too short
138	Nimrod, G. (2014). "The benefits of and constraints to participation in seniors' online communities." Leisure Studies 33(3): 247-266.	Intervention was unclear
139	Nimrod, G. (2010). "Seniors' Online Communities: A Quantitative Content Analysis." Gerontologist 50(3): 382-392.	No usable outcomes
140	Nimrod, G. (2011). "The fun culture in seniors' online communities." The Gerontologist 51(2): 226-237.	No usable outcomes
141	Ng, L., et al. (2013). "Outcomes of a peer support program in multiple sclerosis in an Australian community cohort: A prospective study." Journal of Neurodegenerative Diseases.	Intervention was too short
142	Noice, H., et al. (2004). "A Short-Term Intervention to Enhance Cognitive and Affective Functioning in Older Adults." Journal of aging and health 16(4): 562-585.	No comparator
143	Nseir, S. C. (2012). A Feasibility Study of Tai Chi Easy for Spousally Bereaved Older Adults, Arizona State University. Ph.D.: 165 p-165 p.	Intervention was too short
144	Ntiri, D. W. and M. Stewart (2009). "Transformative learning intervention: effect on functional health literacy and diabetes knowledge in older African Americans." Gerontology & geriatrics education 30(2): 100-113.	Intervention was too short
145	Okvat, H. A. (2012). A pilot study of the benefits of traditional and mindful community gardening for urban older adults' subjective well-being. US, ProQuest Information & Learning. 72: 6370-6370.	Intervention was too short
146	Omer, S., et al. (2016). "Exploring the Mechanisms of a Patient-Centred Assessment with a Solution Focused Approach (DIALOG+) in the	Not a community based participant empowerment

	Community Treatment of Patients with Psychosis: A Process Evaluation within a Cluster-Randomised Controlled Trial." PloS one 11(2): e0148415.	intervention
147	Ostwald, S. K., et al. (2014). "Home-based psychoeducational and mailed information programs for stroke-caregiving dyads post-discharge: a randomized trial." Disability and rehabilitation 36(1): 55-62.	Not a community based participant empowerment intervention
148	Otter, L. and J. Currie (2004). "A long time getting home: Vietnam Veterans' experiences in a community exercise rehabilitation programme." Disability and Rehabilitation: An International, Multidisciplinary Journal 26(1): 27-34.	Intervention was too short
149	Paoletti, I. (2015). "Active Aging and Inclusive Communities: Inter-Institutional Intervention in Portugal." Ageing International 40(2): 165-186.	No numbers of participants in evaluation
150	Park, M. (2011). "Effects of interactive pictorial education on community dwelling older adult's self efficacy and knowledge for safe medication." Journal of Korean Academy of Nursing 41(6): 795-804.	Intervention was too short
151	Park, Y.-H., et al. (2011). "The effects of an integrated health education and exercise program in community-dwelling older adults with hypertension: A randomized controlled trial." Patient Education & Counseling 82(1): 133-137.	Intervention was too short
152	Parker, S. J., et al. (2011). "A comparison of the arthritis foundation self-help program across three race/ethnicity groups." Ethnicity and Disease 21(4): 444-450.	Intervention was too short
153	Parker, R., et al. (2012). "An electronic medication reminder, supported by a monitoring service, to improve medication compliance for elderly people living independently." Journal of telemedicine and telecare 18(3): 156-158.	Intervention was too short
154	Parmer, J., et al. (2015). "Improving Interactive Health Literacy Skills of Older Adults: Lessons Learned From Formative Organizational Research With Community Partners." Progress in community health partnerships : research,	No usable outcomes

	education, and action 9(4): 531-536.	
155	Peteet, J. O. (2002). Self-management of Parkinson's disease: The effect of a group exercise program on lifestyle physical activity, self-efficacy, and function, Walden University. Ph.D.: 163 p-163 p.	Intervention was too short
156	Pesut, B., et al. (2015). "Feasibility of a rural palliative supportive service." Rural and remote health 15(2): 3116.	No usable outcomes
157	Peters, D.-M. (2012). "“Take Me to the Water”—Community and Renewal among Aging Women: A Case Study of Social Interaction and Exercise among the “Polar Bears” of Martha's Vineyard." Journal of women & aging 24(3): 216-226.	No numbers of participants in evaluation
158	Phelan, E. A., et al. (2006). "A five state dissemination of a community-based disability prevention program for older adults." Clinical interventions in aging 1(3): 267-274.	Intervention was too short
159	Piercy, K. W. and C. Cheek (2004). "Tending and befriending: The intertwined relationships of quilters." Journal of Women and Aging 16(1-2): 17-33.	No numbers of participants in evaluation
160	Pinto, B. M., et al. (2013). "Home-based physical activity intervention for colorectal cancer survivors." Psycho-oncology 22(1): 54-64.	Not a community based participant empowerment intervention
161	Poindexter, C. and R. A. Shippy (2008). "Networks of older New Yorkers with HIV: Fragility, resilience, and transformation." AIDS patient care and STDs 22(9): 723-733.	No intervention/intervention not clear
162	Poliakoff, E., et al. (2013). "The effect of gym training on multiple outcomes in Parkinson's disease: a pilot randomised waiting-list controlled trial." NeuroRehabilitation 32(1): 125-134.	Intervention was too short
163	Poor, S., et al. (2012). "The Village Movement Empowers Older Adults to Stay Connected to Home and Community." Generations 36(1): 112-117.	No outcome measure

164	Rabiner, D. J. (2001). "The new senior volunteer: a bold initiative to expand the supply of independent living services to older adults." Home health care services quarterly 20(2): 17-45.	No intervention/intervention not clear
165	Reed, M., et al. (2010). "Meeting stroke survivors' perceived needs: a qualitative study of a community-based exercise and education scheme." Clinical rehabilitation 24(1): 16-25.	Intervention was too short
166	Reger-Nash, B., et al. (2005). "Wheeling walks: Evaluation of a media-based community intervention." Family and Community Health 28(1): 64-78.	Intervention was too short
167	Renzetti, C. M. and D. R. Follingstad (2015). "From Blue to Green: The Development and Implementation of a Therapeutic Horticulture Program for Residents of a Battered Women's Shelter." Violence and victims 30(4): 676-690.	No outcome measure
168	Robinson, C. A., et al. (2013). "Participation in Community Walking Following Stroke: The Influence of Self-Perceived Environmental Barriers." Physical therapy 93(5): 620-627.	Intervention was too short
169	Roe, B., et al. (2011). "Improving quality of life for older people in the community: findings from a local Partnerships for Older People Project innovation and evaluation." Primary health care research & development 12(3): 200-213.	Durations of interventions are not clear
170	Rosenblatt, B. (2014). "Museum Education and Art Therapy: Promoting Wellness in Older Adults." Journal of Museum Education 39(3): 293-301.	No numbers of participants in evaluation
171	Rosenzweig, S., et al. (2010). "Mindfulness-based stress reduction for chronic pain conditions: variation in treatment outcomes and role of home meditation practice." Journal of psychosomatic research 68(1): 29-36.	Age not clear
172	Rubenstein, L. Z., et al. (2000). "Effects of a group exercise program on strength, mobility, and falls among fall-prone elderly men." The journals	Intervention was too short

	of gerontology. Series A, Biological sciences and medical sciences 55(6): M317-321.	
173	Ryan, P. J., et al. (2008). "Lung cancer, caring for the caregivers. A qualitative study of providing pro-active social support targeted to the carers of patients with lung cancer." Palliative medicine 22(3): 233-238.	Not a community based participant empowerment intervention
174	Sabari, J. S., et al. (2015). "Activity engagement and health quality of life in people with Parkinson's disease." Disability and Rehabilitation: An International, Multidisciplinary Journal 37(16): 1411-1415.	Intervention was too short
175	Sala-Disesa, J. M. (2002). The application of short-term, time-limited stress management group psychotherapy with spousal caregivers of Alzheimer's patients: An exploratory study. US, ProQuest Information & Learning. 62: 5977-5977.	Not a community based participant empowerment intervention
176	Saling, L. L., et al. (2015). "Discourse compression of elderly adults in a dyadic context." J Gerontol B Psychol Sci Soc Sci 70(2): 258-263.	Intervention was too short
177	Savikko, N., et al. (2010). "Psychosocial group rehabilitation for lonely older people: favourable processes and mediating factors of the intervention leading to alleviated loneliness." International journal of older people nursing 5(1): 16-24.	Intervention was too short
178	Scharlach, A., et al. (2012). "The "Village" model: a consumer-driven approach for aging in place." The Gerontologist 52(3): 418-427.	No usable outcomes
179	Scharlach, A. E., et al. (2014). "Does the Village model help to foster age-friendly communities?" Journal of aging & social policy 26(1-2): 181-196.	No usable outcomes
180	Schoster, B., et al. (2012). "Methodological tips for overcoming formative evaluation challenges: the case of the Arthritis Foundation Walk With Ease program." Health promotion practice 13(2): 198-203.	Intervention was too short
181	Serrano-Guzmán, M., et al. (2016). "Effectiveness of a flamenco and	Intervention was too

	sevillanas program to enhance mobility, balance, physical activity, blood pressure, body mass, and quality of life in postmenopausal women living in the community in Spain: A randomized clinical trial." Menopause 23(9): 965-973.	short
182	Shaunfield, S., et al. (2014). "Virtual Field Trips for Long-Term Care Residents: A Feasibility Study." Activities, Adaptation & Aging 38(3): 237-247.	Intervention was too short
183	Shapira, N., et al. (2007). "Promoting older adults' well-being through Internet training and use." Aging & mental health 11(5): 477-484.	Intervention was too short
184	Shinkai, S., et al. (2016). "Public health approach to preventing frailty in the community and its effect on healthy aging in Japan." Geriatrics & gerontology international 16: 87-97.	Not a community based intervention, more of a strategy
185	Sidhu, M. S., et al. (2015). "A critique of the design, implementation, and delivery of a culturally-tailored self-management education intervention: a qualitative evaluation." BMC health services research 15: 54.	Intervention was too short
186	Sole, C., et al. (2010). "Contributions of music to aging adults' quality of life." Journal of music therapy 47(3): 264-281.	Intervention was too short
187	Song, R., et al. (2010). "A randomized study of the effects of t'ai chi on muscle strength, bone mineral density, and fear of falling in women with osteoarthritis." Journal of alternative and complementary medicine (New York, N.Y.) 16(3): 227-233.	Intervention was too short
188	Sullivan-Marx, E. M., et al. (2010). "Innovative collaborations: a case study for academic owned nursing practice." Journal of nursing scholarship : an official publication of Sigma Theta Tau International Honor Society of Nursing / Sigma Theta Tau 42(1): 50-57.	No usable outcomes
189	Sun, J. and N. Buys (2013). "Effectiveness of a participative community singing program to improve health behaviors and increase physical activity in	Not meeting age criteria

	Australian Aboriginal and Torres Strait Islander people." International Journal on Disability and Human Development 12(3): 297-304.	
190	Sukwatjanee, A., et al. (2011). "Benefits of a self-help group for rural Thai elders with type-2 diabetes." Pacific Rim International Journal of Nursing Research 15(3): 220-232.	Intervention was too short
191	Taggart, H. M. (2001). "Self-reported benefits of t'ai chi practice by older women." Journal of holistic nursing : official journal of the American Holistic Nurses' Association 19(3): 223-227.	Intervention was too short
192	Tamplin, J., et al. (2013). "'Stroke a Chord': the effect of singing in a community choir on mood and social engagement for people living with aphasia following a stroke." NeuroRehabilitation 32(4): 929-941.	Intervention was too short
193	Tidwell, L., et al. (2004). "Community-based nurse health coaching and its effect on fitness participation." Lippincott's Case Management 9(6): 267-279.	No usable outcomes
194	Thom DH, Ghorob A, Hessler D, De Vore D, Chen E, Bodenheimer TA. (2013) Impact of peer health coaching on glycemic control in lowincome patients with diabetes: a randomized controlled trial. Ann Fam Med.;11(2):137-144.	Intervention too short
195	Tomuro, K. (2004). "Oral home telecare tutorials for the community-dwelling elderly." Journal of medical and dental sciences 51(3): 165-171.	Not a community based participant empowerment intervention
196	Trickey, R., et al. (2008). "A look at a community coming together to meet the needs of older adults: an evaluation of the neighbors Helping Neighbors program." Journal of gerontological social work 50(3-4): 81-98.	Intervention was too short
197	Varvarigou M, Hallam S, Creech A, McQueen H. Benefits experienced by older people who participated in group music-making activities. Journal of Applied Arts and Health, in press.	Intervention too short

198	Warrick, N., et al. (2014). "Caring for caregivers of high-needs older persons." Healthcare quarterly (Toronto, Ont.) 17(3): 24-29.	No outcome measure
199	Waters, D. L., et al. (2011). "Evaluation of a peer-led falls prevention program for older adults." Archives of physical medicine and rehabilitation 92(10): 1581-1586.	Intervention was too short
20(	Weinert, C. and W. G. Hill (2005). "Rural women with chronic illness: computer use and skill acquisition." Women's health issues : official publication of the Jacobs Institute of Women's Health 15(5): 230-236.	Intervention was too short
20	Weinert, C., et al. (2005). "Social support in cyberspace: the next generation." CIN: Computers, Informatics, Nursing 23(1): 7-15.	Not meeting age criteria
20	Weltin, A. (2013). "A Community Garden." American Journal of Nursing 113(11): 59-62.	Not meeting age criteria
20	Wilcox, M. E. (2014). "The Silver Line Helpline: a 'ChildLine' for older people." Working with Older People: Community Care Policy & Practice 18(4): 197-204.	Intervention was too short
20	Wilkens, J. (2015). "Loneliness and belongingness in older lesbians: the role of social groups as "community"." Journal of lesbian studies 19(1): 90-101.	Duration unclear
20	Wilz, G. and M. Fink-Heitz (2008). "Assisted vacations for men with dementia and their caregiving spouses: evaluation of health-related effects." The Gerontologist 48(1): 115-120.	Outcomes only for caregivers
20	Wong, G. H. Y., et al. (2015). "Development of Six Arts, a Culturally Appropriate Multimodal Nonpharmacological Intervention in Dementia." Gerontologist 55(5): 865-874.	No usable outcomes
20	Wood, A. H. and A. J. Alberta (2009). "A community-driven behavioral health approach for older adults: lessons learned." Journal of Community Psychology 37(5): 663-669.	No usable outcomes

20	Woodward, A. T., et al. (2013). "Outcomes from a peer tutor model for teaching technology to older adults." Ageing & Society 33(8): 1315-1338.	No comparator
20	Yoo, S., et al. (2009). "The 6-step model for community empowerment: revisited in public housing communities for low-income senior citizens." Health promotion practice 10(2): 262-275.	No usable outcomes
21	Yotsui, M., et al. (2016). "Collective action by older people in natural disasters: the Great East Japan Earthquake." Ageing & Society 36(5): 1052-1082.	No usable outcomes
211	Yip, K. S. and S. O. Law (2002). "A natural locally-based networking approach for singleton disabled elderly: Implementation and case illustration." British Journal of Social Work 32(8): 1037-1049.	Number of participants unclear

Table 4: Articles included after full text assessment

No.	Article included
1.	Aday, R. H., et al. (2006). "Impact of senior center friendships on aging women who live alone." Journal of women & aging 18(1): 57-73.
2.	Bertera, E. M. (2014). "Storytelling Slide Shows to Improve Diabetes and High Blood Pressure Knowledge and Self-Efficacy: Three-Year Results Among Community Dwelling Older African Americans." Educational Gerontology 40(11): 785-800.
3.	Boen, H., et al. (2012). "A randomized controlled trial of a senior centre group programme for increasing social support and preventing depression in elderly people living at home in Norway." BMC geriatrics 12: 20.
4.	Brodrick, K. and M. Mafuya (2005). "Effectiveness of the non-profit organisation, 'Grandmothers Against Poverty and AIDS' - A study." Southern African Journal of HIV Medicine(19): 37-41.
5.	Butler, S. S. (2006). "Evaluating the Senior Companion Program: a mixed-method approach." Journal of gerontological social work 47(1-2): 45-70.
6.	Cant, B. and A. Taket (2005). "Promoting social support and social networks among Irish

	pensioners in South London, UK." Diversity in Health & Social Care 2(4): 263-270.
7.	Cattan, M., et al. (2011). "The use of telephone befriending in low level support for socially isolated older people--an evaluation." Health & social care in the community 19(2): 198-206.
8.	Ciechanowski, P., et al. (2004). "Community-integrated home-based depression treatment in older adults: a randomized controlled trial." JAMA 291(13): 1569-1577.
9.	Cohen-Mansfield, J., et al. (2010). "The impact of a Naturally Occurring Retirement Communities service program in Maryland, USA." Health promotion international 25(2): 210-220.
10.	Cohen, G. D., et al. (2006). "The impact of professionally conducted cultural programs on the physical health, mental health, and social functioning of older adults." Gerontologist 46(6): 726-734.
11.	Cordella, M., et al. (2012). "Intergenerational and Intercultural Encounters: Connecting Students and Older People Through Language Learning." Journal of Intergenerational Relationships 10(1): 80-85.
12.	Coull, A. J., et al. (2004). "A randomised controlled trial of senior Lay Health Mentoring in older people with ischaemic heart disease: The Braveheart Project." Age and ageing 33(4): 348-354.
13.	Crane-Okada, R., et al. (2012). "Senior Peer Counseling by Telephone for Psychosocial Support After Breast Cancer Surgery: Effects at Six Months." Oncology nursing forum 39(1): 78-89.
14.	Creech, A., et al. (2013). "Active music making: a route to enhanced subjective well-being among older people." Perspectives in public health 133(1): 36-43.
15.	de Bruin, S., et al. (2012). "Comparing day care at green care farms and at regular day care facilities with regard to their effects on functional performance of community-dwelling older people with dementia." Dementia (14713012) 11(4): 503-519.
16.	de Souza, E. M. (2003). "Intergenerational interaction in health promotion: A qualitative study in Brazil." Revista de saude publica 37(4): 463-469.
17.	Dickson, G. (2000). "Aboriginal grandmothers' experience with health promotion and participatory action research." Qualitative health research 10(2): 188-213.
18.	Droes, R.-M., et al. (2004). "Effect of combined support for people with dementia and carers

	versus regular day care on behaviour and mood of persons with dementia: results from a multi-centre implementation study." International journal of geriatric psychiatry 19(7): 673-684.
19.	Even-Zohar, A. (2014). "Quality of life of older people in Israel: a comparison between older people living at home who are members of a 'supportive community' and nursing home residents." European Journal of Social Work 17(5): 737-753.
20.	Gammonley, D. (2006). "A Lay Helper Intervention for Rural Elders with Severe Mental Illness." Social Work in Mental Health 4(4): 1-19.
21.	Greaves, C. J. and L. Farbus (2006). "Effects of creative and social activity on the health and well-being of socially isolated older people: outcomes from a multi-method observational study." The journal of the Royal Society for the Promotion of Health 126(3): 134-142.
22.	Hillman, (2002) "Participatory singing for older people: a perception of benefit", Health Education, 102 (4): 163-171
23.	Ho, A. P. Y. (2007). "A peer counselling program for the elderly with depression living in the community." Aging & mental health 11(1): 69-74.
24.	Holland, C. A., et al. (2008). "The 'Healthy Passport' intervention with older people in an English urban environment: effects of incentives and peer-group organisers in promoting healthy living." Ageing & Society 28(4): 525-549.
25.	Keller, H. H., et al. (2004). "Men can cook! Development, implementation, and evaluation of a senior men's cooking group." Journal of nutrition for the elderly 24(1): 71-87.
26.	Kondo, N., et al. (2007). "Engagement in a cohesive group and higher-level functional capacity in older adults in Japan: a case of the Mujin." Social science & medicine (1982) 64(11): 2311-2323.
27.	Maidment, J. and S. MacFarlane (2009). "Craft groups: Sites of friendship, empowerment, belonging and learning for older women." Groupwork 19(1): 10-25.
28.	Marhankova, J. H. (2011). "Leisure in old age: disciplinary practices surrounding the discourse of active ageing." International Journal of Ageing and Later Life 6(1): 5-32.
29.	Martin, P. and T. V. McCann (2005). "Exercise and older women's wellbeing." Contemporary

	nurse 20(2): 169-179.
30.	Martina, C. M. S., et al. (2012). "Promotion of self-management in friendship." Aging & mental health 16(2): 245-253.
31.	McWilliam, C. L., et al. (2004). "Flexible client-driven in-home case management: an option to consider." Care management journals : Journal of case management ; The journal of long term home health care 5(2): 73-86.
32.	Milligan, C., et al. (2015). "Place and wellbeing: shedding light on activity interventions for older men." Ageing & Society 35(1): 124-149.
33.	Narushima, M. (2008). "More than nickels and dimes: the health benefits of a community-based lifelong learning programme for older adults." International Journal of Lifelong Education 27(6): 673-692.
34.	Nomura, M., et al. (2009). "Empowering older people with early dementia and family caregivers: A participatory action research study." International journal of nursing studies 46(4): 431-441.
35.	Paul, S. S., et al. (2016). "Seniors' Recreation Centers in Rural India: Need of the Hour." Indian Journal of Community Medicine 41(6): 219-222.
36.	Phelan, E. A., et al. (2002). "Outcomes of a community-based dissemination of the health enhancement program." J Am Geriatr Soc 50(9): 1519-1524.
37.	Ruffing-Rahal, M. and J. Wallace (2000). "Successful aging in a wellness group for older women." Health care for women international 21(4): 267-275. and Ruffing-Rahal, M. A. (1994). Evaluation of group health promotion with community-dwelling older women. Public Health Nursing, 11, 38–48
38.	Safford, M. M., et al. (2015). "Peer Coaches to Improve Diabetes Outcomes in Rural Alabama: A Cluster Randomized Trial." Annals of family medicine 13 Suppl 1: S18-26.
39.	Sanchez-Rodriguez, M. A., et al. (2009). "Effect of a self-care program on oxidative stress and cognitive function in an older Mexican urban-dwelling population." The journal of nutrition, health & aging 13(9): 791-796.
40.	Skingley, A. and H. Bungay (2010). "The Silver Song Club Project: singing to promote the

	health of older people." British journal of community nursing 15(3): 135-140.
41.	Son, J., et al. (2010). "Engendering social capital through a leisure club for middle-aged and older women: implications for individual and community health and well-being." Leisure Studies 29(1): 67-83.
42.	Son, J. S., et al. (2007). "Promoting older women's health and well-being through social leisure environments: what we have learned from the Red Hat Society." Journal of women & aging 19(3-4): 89-104.
43.	Thomas, G. N., et al. (2012). "Health promotion in older Chinese: a 12-month cluster randomized controlled trial of pedometry and "peer support"." Medicine and science in sports and exercise 44(6): 1157-1166.
44.	Wurzer, B., et al. (2014). "Long-term participation in peer-led fall prevention classes predicts lower fall incidence." Archives of physical medicine and rehabilitation 95(6): 1060-1066.

Table 5: Data extraction of study and participants' characteristics

Note – for all tables NR = Not Reported.

The age is reported as mean with standard deviation or range. In case these are not available there will be a specific mention of the measure (such as median).

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
Aday 2006	USA	Cross-sectional survey with historical control Quantitative	415	74.4 (51 – 96)	100%	80% white; 10.7% African-American; 8.4%	NR	Women living alone significantly older, significantly lower educational levels than their

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
						Hispanic, Native American and Asian		married counterparts.
Bertera 2014	USA	Controlled cohort Quantitative	429	72	I: 78% C:82%	91% African Americans (both groups)	NR	The comparison group respondents were affordable housing residents from sites other than those used for the intervention sessions.
Bøen 2012	Norway	Randomised control trial Quantitative	138	Older than 65 (no other age measure)	I: 59.5 % C: 54.7%	NR	Depression	Intervention groups was slightly more depressed than the controls
Brodrick 2005	South Africa	Cross-sectional study with historical control Quantitative Qualitative	163	40 to 90 years (82% more than 50)	100%	NR	8 HIV positive respondents	No control group

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
Butler 2006	USA	Case series with historical controls Quantitative and qualitative	66	78	81.8%	NR	No	The clients were on average older, more likely to be widowed, and more likely to live alone, less likely to have high school degrees and more likely to have post-secondary degrees.
Cant 2005	UK	Qualitative case series	8	NR Reported age of some interviewees > 70 years old.	50%	100% White Irish	The sample included those without any diagnosed mental health problems	No control group

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
							, those with some diagnosis and those with a diagnosis of major mental health problems.	
Cattan 2011	UK (England and Scotland)	Qualitative case series	40	Mid 50s to early 90s	NR	NR	NR	No control
Ciechanowski 2004	USA	Randomized control trial Quantitative	138	73	79%	African American, 36%; Asian American, 4%;	48.6% had dysthymia and	Intervention group had significantly more dysthymia than the usual

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
						Hispanic, 1%; and American Indian, 1%; American White 58%;	51.4% had minor depression	care group (61% vs 35%; 1=9.5; P=.002) and less neuroticism (NEO neuroticism scale range, 1-5; mean scores, 2.9 [SD, 0.7] vs 3.1 [SD, 0.7]; t136=2.1; P=.04)
Cohen 2006	USA	Controlled cohort	166	Intervention 79; Controls 79.6;	Intervention 78; Controls 80;	Intervention: 92% Whites (non-Hispanic), and 8% minorities; Control: 93% Whites (non-Hispanic), and	Sample included participants that were healthy enough to participate	Baseline demographic analyses revealed no statistically significant differences between the groups. This was not the case after subsequent

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
						7% minorities (African American, Asian American, and Hispanic)	regularly in community-based activities.	analysis.
Cohen-Mansfield 2010	USA	Controlled cohort Quantitative	128	Baseline: (Cases) 80; (Controls) 76 Follow-up: (Cases) 81; (Controls) 75	Baseline: 76.6% Follow-up: 83%	92% Caucasian	NR	Non-members were younger, included more males, had significantly higher levels of education, higher income and fewer lived alone when compared with the member group.
Cordella 2012	Australia	Case series with historical control Quantitative and qualitative	116	58-94	58.62%	Asian, Caucasian, Hispanic	NR	No control
Coull	Scotlan	Randomized	320	Cases:	Cases:	NR	Ischaemi	No

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
2004	d	Control Trial Quantitative		67.7; Controls: 67.4;	39%; Controls: 40%;		c heart disease	
Crane-Okada 2012	USA	Randomised control trial Quantitative	142	61.8 (50-94)	100%	NR	Breast cancer surgery	No significant differences.
Creech 2013	United Kingdom	Controlled cohort Quantitative	500	Modal age: 65	81%	NR	NR	In the non-music group there was a greater proportion of those who classed themselves as housewife/retired.
de Bruin 2011	Netherlands	Controlled cohort Quantitative	88	Participants older than 65 years Cohort A (GCF): 77.7 (±5.2; 78.6); RDCF:	43%	NR	Dementia	Difference in distribution of sex, caregivers and marital status.

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
				83.4 (± 5.8; 84.4) Cohort B (CGF): 75.4 (± 7.5; 76.0); RDCF: 82.0 (± 7.2; 81.0) Cohort C (CGF): 79.0 (± 4.6; 78.1); RDCF: 82.8 (± 6.6; 81.7)				
de Souza 2003	Brazil	Qualitative case series	26	⩾ 60	NR	NR	NR	No control group

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
Dickson 2000	Canada	Qualitative case series	14	NR but participants designed as 'grandmothers'	100%	First Nations and Metis	NR	No control group
Droes 2004	Netherlands	Controlled cohort Quantitative	112	Cases: 76.8 (6.0); Controls: 75.4 (5.9)	43,82%	NR	Diagnosed with mild to severe dementia (all types)	91 cases, 31 controls ; Significant statistical difference in severity of dementia between cases and controls;
Even-Zohar 2014	Israel	Cross-sectional survey with concurrent control Quantitative	115	Cases: 74.7 Controls: 75.8	62.6%	NR	NR	Supportive community members younger and had better health and economic status than the residents

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
								in nursing home.
Gammonley 2006	USA	Matched cohort Quantitative	10	Participants older than 60	NR	Majority African-American	Severe mental health illness	The paper mentions a comparison group although doesn't provide outcome data. No imbalances between groups.
Greaves 2005	UK	Cohort with historical control Quantitative and Qualitative	Qualitative: 35 Quantitative: 172	Quantitative: 77 (52 to 96).	Qualitative: 54%; Quantitative: 76%;	NR	No mental or physical health problems that would make them a danger to others or that	No control

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
							require special nursing care when attending activities	
Ho 2007	Hong Kong	Cohort with historical control Quantitative and qualitative	30	74.5 (7.5)	77%	Asian	Depression	No control
Holland 2008	United Kingdom	Cohort with historical control Quantitative	186	71.3 (8.5)	83%	91% White 0.5% Indian 7% African-Caribbean	NR	Those who dropped out reported more health problems and were slightly less active. They were marginally more likely to report that their physical or emotional problems

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
								interfered with social activities and more likely to have chronic health problems,
Keller 2004	Canada	Cohort with historical control Quantitative and qualitative	19 (10 participated in interviews)	Older than 65, 60% between 75-85;	0%	NR	NR	No control
Kondo 2007	Japan	Cross-sectional survey with historical control Quantitative	581	76.4 (6.94)	48%	Japanese	NR	NR
Hillman 2002	UK	Cross-sectional survey Quantitative	75	Over 60	80%	NR	47% of all respondents had experienced	No control

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
							personal health problems before or during the intervention	
Maidment 2009	Australia	Qualitative case series	9	> 70 years	100%	NR	NR	NR
Marhankova 2011	Czech Republic	Qualitative case series	34	> 60	88.2%	NR	NR	No differences reported (ethnographically following two centres)
Martin 2005	Australia	Qualitative case series	10	> 50	100%	NR	NR	No control
Martina 2012	The Netherlands	Case control Quantitative and qualitative - only quantitative	115	63.2 (53 – 86)	100%	NR	NR	Significant differences in reported health restrictions. Cases

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
		results presented in this article, unclearif or where qualitative results reported						had fewer no restrictions and more mild restrictions than controls. Otherwise no notable difference.
McWilliam 2004	Canada	Controlled cohort Quantitative	1783	>65	29.4%	NR	Arthritis, cardiovascular disease, respiratory disease, multiple sclerosis, paralysis, and other medical problems classified	NR

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
							as disabling.	
Milligan 2015	UK	Qualitative case series	135	Median age: 70.4	0%	NR	NR	No control
Narushima 2008	Canada	Qualitative case series	15	64-83	66.6%	Caucasian, Asian, other	all but one had at least one chronic health problem	No control
Nomura 2009	Japan	Qualitative case series	37	78.9±6.0	70.3%	Asian	Early or mild dementia with a Mini-Mental State Examination	No control

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
							(MMSE) ⩾18	
Paul 2016	India	Cohort with historical control Quantitative and qualitative	140	NR - senior/ geriatric population	72%	NR	NR	No control
Phelan 2002	USA	Cohort with historical control Quantitative	555	Completing 1year 75.9±6.6 Not completing 1 year 76.0±6.7	Completing 1year 70.9% Not completing 1 year 67.2%	NR	At least one chronic illness, excluding dementia and terminal disease	Historical control
Ruffing-Rahal 2000	USA	Controlled cohort Quantitative	14	77 (in 1990); 81(in 1997)	92.3% (initial group)	majority were African American	NR	No control
Safford 2015	USA	Cluster randomised controlled trial	424	Mean age: 60.2 years	75.3%	87.4% African American	Diabetes	No significant differences at baseline.

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
		Quantitative						Participants without follow-up tended to be younger and to have more depressive symptoms.
Sanchez-Rodriguez 2009	Mexico	Cohort with historical control Quantitative	79	60 to 74	78.48% (enrolled); 83% (completed);	Latino	Healthy	No control
Skingley 2010	United Kingdom	Qualitative case series	17	Mean: 77 years	70.6%	NR	NR	No control
Son 2010	Not clear – potentially 30 countries	Qualitative case series	1693	51–70 (80%)	100%	NR	NR	No control

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
Son 2007	Not clear potentially 30 countries	Qualitative case series	1693	51–70 (80%)	100%	White (96%)	NR	No control
Thomas 2012	Hong Kong	Cluster randomised controlled trial Quantitative	399	C: 72.4 ±6.3 I: 71.7 ±5.7	66.1%	NR	Participants with no recent history of myocardial infarction or stroke and no physical disabilities.	Buddy control subjects had a slightly larger BMI.
Wurzer 2014	New Zealand	Cohort with historical control	207;	77.65 (6.6)	91.3%	Not mentioned	Mean of 1.7 ±	No control

First author, date	Country	Study design	Participants					
			Total sample size	Age (Mean [SD/range)	% female	Ethnicity	Any health conditions	Notable differences between groups
		Quantitative		（Range 61-99）			1.1 of no. of medical conditions.	

Table 6: Summary characteristics of interventions and their comparators

No.	Article included – First author and date	Intervention	Country	Comparators	
				Concurrent	Historical
1.	Aday, R. H., et al. (2006)	Senior centres –offering health, education, recreation, volunteer and other social interaction opportunities for their participants.	USA	No	Yes
2.	Bertera, E. M. (2014)	Educational intervention using the Storytelling Slide Shows- adding spoken dialogue to the graphic elements to further tailor content and increase understanding for lower literacy audiences. The voices of the community members were recorded and used in the slide shows to tell the story through culturally appropriate dialogue. Recruited volunteer talent from the	USA	Yes	Yes

No.	Article included – First author and date	Intervention	Country	Comparators	
				Concurrent	Historical
		study population for the photos and dialogue used in the Storytelling Slide Shows.			
3.	Boen, H., et al. (2012)	A group meeting programme addressing psychological problems such as depressive symptoms, loneliness and the isolation of elders within the senior centres context. The programme involved a self-help group where topics that the participants agreed upon themselves such as safety in the home and outdoors, how to avoid falling, social relations and aging, humour and laughter were discussed. These elements of the programme were well-known as key elements in daily activities at the centres. The group leaders were volunteers.	Norway	Yes	No
4.	Brodrick, K. and M. Mafuya (2005)	Non-profit organisation called 'Grandmothers Against Poverty and AIDS'. The intervention included workshops and a psychosocial support groups. Grandmothers who had been trained in the pilot intervention phase had developed sufficient confidence in their own knowledge of HIV/AIDS and handicraft skills to lead others. Support home groups leaders were grandmothers themselves.	South Africa	No	Yes

No.	Article included – First author and date	Intervention	Country	Comparators	
				Concurrent	Historical
5.	Butler, S. S. (2006)	Senior Companionship Programme (SCP); older volunteers provide social support and assistance to elders in their communities. Both clients and senior companion volunteers reported empowerment.	USA	Yes	No
6.	Cant, B. and A. Taket (2005)	Irish-led voluntary sector project for Irish elderly living in a socio-economically deprived borough. The organisation provided lunches and recreational activities as well as advocacy and befriending services.	UK	No	Yes
7.	Cattan, M., et al. (2011)	Call in Time Programme eight telephone support projects in different locations. Participants were either older people who were in receipt of the befriending service, that is, befriendees, older people who acted as volunteers for the befriending service, that is, befrienders, or older people who performed both roles.	UK (England and Scotland)	No	Yes
8.	Ciechanowski, P., et al. (2004)	Program to Encourage Active, Rewarding Lives for Seniors (PEARLS) - a home-based intervention focusing on problem solving treatment (PST) - a home-based program of detecting and managing minor depression or dysthymia among older adults. From the PTS activities, group activities	USA	Yes	Yes

No.	Article included – First author and date	Intervention	Country	Comparators	
				Concurrent	Historical
		encouraging peer support were given highest priority.			
9.	Cohen-Mansfield, J., et al. (2010)	Community Partners (CP) which helps older persons remain in their own homes by providing health, social work, activities and transportation services to six apartment buildings.	USA	Yes	No
10.	Cohen, G. D., et al. (2006)	Chorale (choir) directed by a professional conductor involving community-dwelling older adults.	USA	Yes	Yes
11.	Cordella, M., et al. (2012)	Pairing upper secondary school language learners of Chinese, German, or Spanish with older speakers of the languages. Intervention delivered by older people which were in control of the discussion/classes.	Australia	No	Yes
12.	Coull, A. J., et al. (2004)	The Braveheart Project – an 'Ageing Well' initiative to improve and maintain the health of older people through using senior health mentors as peer support.	Scotland	Yes	No
13.	Crane-Okada, R., et al. (2012)	Senior peer counselling by telephone for supplemental psychological support of older women after breast cancer surgery.	USA	Yes	No
14.	Creech, A., et al. (2013)	Musical community involvement, comprising a wide range of group musical activities that included steel pans, guitars, ukulele, recorder,	UK	Yes	No

No.	Article included – First author and date	Intervention	Country	Comparators	
				Concurrent	Historical
		keyboards, samba, singing and songwriting.			
15.	de Bruin, S., et al. (2012)	Green care farms (GCFs) combine agricultural production with care services. At GCFs, people can spend the day and, in addition to leisure and recreational activities, take part in normal home-like, farm-related and outdoor activities	Netherlands	Yes	No
16.	de Souza, E. M. (2003)	Intergenerational project (sharing of life experiences) . The older persons shared their life experiences with students in the classroom.	Brazil	Yes	No
17.	Dickson, G. (2000)	Health promotion project for older Aboriginal women with the health assessment part conducted using participatory action research. Activities included morning get-togethers, home meetings, participation in community committees, community development workshops, special celebrations.	Canada	No	Yes
18.	Droes, R.-M., et al. (2004)	A social club that offers information and support to both patients and informal caregivers. This is offered in a community-based location (so not a nursing home), integrated in the neighbourhood.	Netherlands	Yes	Yes
19.	Even-Zohar,	The supportive community programme	Israel	Yes	No

No.	Article included – First author and date	Intervention	Country	Comparators	
				Concurrent	Historical
	A. (2014)	for older people who live at home, providing a service package that includes medical and social services, emergency call-button, cultural activities and a 'community parent' who is responsible for the members.			
20.	Gammonley, D. (2006)	Carolina Companions lay helper model in which companions were trained and paid to support peer older adults with severe mental illness to undertake a range of daily activities.	USA	Yes	No
21.	Greaves, C. J. and L. Farbus (2006)	Upstream Healthy Living Centre – a mentored intervention for elderly socially isolated people, designed to provide individually stimulating creative activity and active (participatory and self-determined) social contact.	UK	No	Yes
22.	Hillman, (2002)	Call that singing? – mass singing group. A community art project involving participatory singing.	Hong Kong	No	Yes
23.	Ho, A. P. Y. (2007)	Peer counselling which were housewives or retirees aged 50-60, living in the same community as the participants.	UK	No	Yes
24.	Holland, C. A., et al. (2008)	Health intervention scheme called 'The Healthy Passport'. Distinctive features included the use of incentives to take part and to encourage long-term adherence (point scheme translated into	Canada	No	Yes

No.	Article included – First author and date	Intervention	Country	Comparators	
				Concurrent	Historical
		prizes) and the role of peer-group facilitators.			
25.	Keller, H. H., et al. (2004)	Men's Cooking Group, a component of the Evergreen Action Nutrition, an innovative nutrition education program provided in a seniors' recreation centre. The program involves preparing and consuming a meal and advice from a registered dietitian. Nominal fee is paid by seniors.	Japan	No	Yes
26.	Kondo, N., et al. (2007)	Mujin: a traditional Japanese rotating saving and credit association (RoSCA) which provides social networking to its members. It is community based and relies on members' involvement.	UK	Yes	No
27.	Maidment, J. and S. MacFarlane (2009)	Craft groups for older women. Crafts varied and included textile handcrafts, gardening or production of various artefacts (making a cushion or doll, crocheting doilies or knitting jumpers and babies clothes). The groups were started and run by the women themselves. Peer teaching of craft technics.	Australia	Yes	Yes
28.	Marhankova, J. H. (2011)	Centre offering seniors-only leisure time activities, including language classes. Most of the informants actively participated not only in the centres that were being followed but also in other	Czech Republic	Yes	No

No.	Article included – First author and date	Intervention	Country	Comparators	
				Concurrent	Historical
		various centres and activities that were aimed at seniors.			
29.	Martin, P. and T. V. McCann (2005)	Group of older women who attend a fitness centre to participate in regular exercise. Participants exercised in groups initiated by them.	Australia	No	Yes
30.	Martina, C. M. S., et al. (2012)	Friendship enrichment programme – focusing on self-management by stimulating participants to take initiative in developing new friendships.	The Netherlands	Yes	Yes
31.	McWilliam, C. L., et al. (2004)	Home care program that has converted its service delivery to a flexible client-driven approach in which the case manager responds flexibly to clients as partners in determining their involvement in their own care management.	Canada	Yes	Yes
32.	Milligan, C., et al. (2015)	'Men in Sheds' initiative: sheds provide a space for older men to meet, socialise, teach and learn new skills and participate in 'DIY' or similar activities with other older men, with a focus on communal rather than individual activity.	UK	No	Yes
33.	Narushima, M. (2008)	TDSB Seniors' Daytime Program - Community-based continuing education for seniors in four subject areas: 1) arts and crafts, 2) fitness and exercise, 3) music and dance, and 4) language and computer skills.	Canada	No	Yes

No.	Article included – First author and date	Intervention	Country	Comparators	
				Concurrent	Historical
34.	Nomura, M., et al. (2009)	The participatory action research evolved over three cycles: at individual, group, and community levels. The programme for participants with dementia included health counselling and cooking activities in the morning, and various other activities were conducted in the afternoon. The intervention also involved education and counselling programmes for family caregivers.	Japan	No	Yes
35.	Paul, S. S., et al. (2016)	Six “senior citizens’ recreation centers” run in six villages under a community health program, providing one meal per day as well as several recreational activities, physical activities, medical services and engagement in small income-generation activities including goat rearing and paper bag making.	India	No	Yes
36.	Phelan, E. A., et al. (2002)	Health Enhancement Program (HEP) - nurse conducted an initial assessment of health and functional status and risk factors for disability and then, working with the participant, developed a personalized “health action plan,”	USA	No	Yes
37.	Ruffing-Rahal, M. and J. Wallace	Group meetings with a physical activity component (that became less relevant) as well as group discussions about self-	USA	Yes	Yes

No.	Article included – First author and date	Intervention	Country	Comparators	
				Concurrent	Historical
	(2000)	care and well-being topics.			
38.	Safford, M. M., et al. (2015)	Telephone-delivered peer coaching plus a 1-hour group diabetes education class.	USA	Yes	Yes
39.	Sanchez-Rodriguez, M. A., et al. (2009)	Community health care model for the development of gerontological nucleus.	Mexico	No	Yes
40.	Skingley, A. and H. Bungay (2010)	Silver Song Club Project: community-based groups providing opportunities for older people to come together and sing, facilitated by experienced musicians as facilitators and supported by volunteers.	UK	No	Yes
41.	Son, J., et al. (2010)	The Red Hat Society - international leisure club (in 30 countries) predominantly for middle-aged and older women (i.e. 50 years of age and older). There are no rules except that members over 50 wear red hats and purple outfits and members under 50 wear pink hats and lavender outfits.	Not clear – potentially 30 countries	No	Yes
42.	Son, J. S., et al. (2007)	Please see above	Not clear potentially 30 countries	No	Yes
43.	Thomas, G. N., et al. (2012)	Provision of a pedometer and participation in a “buddy style” peer support programme on physical fitness	Hong Kong	Yes	No

No.	Article included – First author and date	Intervention	Country	Comparators	
				Concurrent	Historical
		and activity and cardiovascular risk factors (anthropometry and blood pressure).			
44.	Wurzer, B., et al. (2014)	SAYGO- Steady as you go- Peer-led fall prevention exercise classes.	New Zealand	No	Yes

Table 7: Comparative analysis of numerical results

*Note: All outcomes are means and standard deviation (in brackets) unless otherwise specifically mentioned; *p≤0.05;*

First author, date	Outcome description *Physical condition QoL measures (Eq50, SF36, NHP, DALY, QUALY) Wellbeing Mental health*	Follow-up 1		Follow-up 2 (if reported)		Attendance and drop out information
		Intervention *Numbers Mean (SD)*	Control *Numbers Mean (SD)*	Intervention *Numbers Mean (SD)*	Control *Numbers Mean (SD)*	
Aday 2006	Mental Health Measures	Living Alone (n = 274)	Living With Spouse (n = 141)			NR
	Have more energy	0.25 (0.43)*	0.17 (0.38)*			
	Cope with stress better	0.23 (0.42)*	0.15 (0.36)*			
	Laugh more	0.54	0.42			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		(0.50)*	(0.50)*			
	Worry less about future	0.65 (0.47)*	0.53 (0.50)*			
	Feel less lonely	0.57 (0.49)*	0.28 (0.45)*			
	More satisfied about life	0.48 (0.50)*	0.33 (0.47)*			
	Feel more independent	0.35 (0.51)*	0.19 (0.39)*			
	Improved mental health	3.61 (0.66) *	3.34 (0.77)*			
	Depression	1.74 (2.28)	1.47 (2.23)			
		*p≤0.05;				
Bertera 2014		*Please see each row*	n=108			
	Eating decisions	n = 212 3.83 (0.92015)*	3.65 (0.96958)			NR

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	High blood pressure knowledge score	n = 115 4.16 (0.77609)*	3.88 (0.62712)			
	Self-efficacy score diabetes	n = 115 6.91(1.45)*	6.81 (1.70)			
	Self-efficacy score high blood pressure	n = 115 8.05 (1.09)*	7.55 (1.59)			
		*p<0.01				
Bøen 2012		n=37	*Please see each row*			33.3 %
	Life satisfaction	3.59 (0.76)	3.61 (0.79) (n=54)			
	Health	2.24 (0.72)	2.40 (0.63) (n=55)			
	Social Support	9.97 (2.05)	9.69 (2.09) (n=54)			
	BDI	10.70 (5.95)	9.44 (4.19) (n=55)			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
Brodrick 2005	*While presenting some results of the survey the study does not do so in a rigorous manner that allows reporting. Please see the table presenting the qualitative results.*					
Butler 2006	*We present results for both clients and senior companions. These two groups are both beneficiaries of the intervention (no control).*	n=32 (clients)	n=34 (senior companions)			NR
	Lubben's Social Network Scale-Abbreviated (LSNS-A)	14.6	17.4			
	UCLA Loneliness Scale	31.0	29.1			
	Centre for Epidemiological	11.8	6.7			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Studies Depression Scale (CES-D)					
	Tension	4.5	3.6			
	Anger	2.3	1.9			
	Depression	3.8	1.9			
	Vigor	7.4	11.9			
	Fatigue	7.7	6.1			
	Confusion	5.0	3.2			
Ciechanowski 2004	Depression outcomes	n=72	n=66	n=72	n=66	NR
	HSCL-20 depression score, mean (SD) (range, 0-4)	0.71 (0.6)	1.17 (0.53)	0.82 (0.62)	1.01 (0.46)	
	Response (50% decrease in HSCL-20 depression score from baseline), No. (%)	37 (54)	5 (8)	29 (43)	9 (15)	

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Complete remission of depression symptoms (HSCL-20 score 0.5), No. (%)	30 (44)	6 (10)	24 (36)	7 (12)	
	Health Care Utilization					
	≥5 Outpatient visits in prior 6 mo	27 (40)	26 (43)	29 (43)	28 (47)	
	Any emergency department visits in prior 6 mo	17 (25)	22 (36)	22 (33)	19 (32)	
	Any hospitalizations in prior 6 mo†	15 (22)	21 (34)	18 (27)	21 (35)	
Cohen 2006	Health indicators	n=77	N=64			15%
	Overall health rating***	7.97 (1.58)	7.25 (1.91)			
	Number of doctor visits**	6.73 (7.00)	10.84 (14.49)			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Number of over-the-counter medications***	2.61 (2.13)	4.25 (4.60)			
	Number of falls**	0.23 (0.69)	0.55 (1.30)			
	Other health problems*	0.30 (0.46)	0.45 (0.50)			
	Mood indicator	n=77	N=64			
	Morale**	14.08 (2.66)	13.06 (3.29)			
	Depression	1.14 (1.84)	1.84 (1.89)			
	Loneliness*	34.60 (7.86)	37.02 (10.33)			
	Level of activity	n=77	N=64			
	Total number of weekly activities**	4.29 (2.55)	2.58 (1.82)			
	Total number of activities**	10.55 (5.04)	8.02 (3.70)			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	*p<0.10; **p<0.05; ***p<0.01;					
Cohen-Mansfield 2010	Screened measures of function and need	n = 81	n =75			67.5%
	Memory	0.32	0.23			
	Health	0.24	0.62			
	Body mass index	25.5	26.13			
	Functional status	2.27	2.55			
	Depressed affect	0.48*	1.23*			
	Satisfaction with community services	n = 81	n =75			
	Their ability to get where you need to go	3.22	3.46			
	The recreation activities they participate in	3.87*	3.3*			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Their social life in the neighbourhood	3.03*	2.62*			
		*p<0.05				
Cordella 2012		N=22				NR
	Satisfaction	Significant increase in their satisfaction with support from friends.				
	Self-rated quality of life	No significant increase in their self-rated quality of life or self-esteem.				
	Self-rated self-esteem					
		[No numerical values reported- study was kept because it also reports qualitative outcomes]				

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
Coull 2004	Lifestyle risk factors	N=140	N=140			9.6% : 6 cases died and 10 unfit or dropped out; 6 controls died and 8 unfit or dropped out;
	Current smokers	15%	14%			
	Statement of Current Exercise Activity	4.55*	4.31*			
	Time spent on exercise in previous seven days (mean in minutes)	843	767			
	Walking	388*	320*			
	Manual work / DIY	141	151			
	Gardening	140	145			
	Golf / bowls	63	47			
	Aerobics / exercise classes	36*	23*			
	Swimming	13	16			
	Duration of exercise tolerance test (mean in seconds)	N=100 347	N=89 344			

First author, date	Outcome description *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	Follow-up 1		Follow-up 2 (if reported)		Attendance and drop out information
		Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	
	Dietary management	N=149	N=140			
	Not using PUFA spreads	84%*	68%*			
	Mainly using PUFA LF	36%	32%			
	Mainly using MONO RF	21%*	10%*			
	Food diary information	N=111	N=108			
	Energy (mean in kcals)	1644	1649			
	Protein (as % energy)	18.2%	18.0%			
	Carbohydrate (as % energy)	51.7%*	49.4%*			
	Fat (as % energy)	27.9%*	30.5%*			
	Saturated fat (as % energy)	10.5%*	11.4%*			
	Resource usage	N=149	N=140			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Total episodes (mean)	0.38	0.39			
	CHD episodes (mean)	0.17	0.24			
	Total days (mean)	1.81	2.46			
	CHD days (mean)	0.99	1.25			
	Day cases					
	Total day cases (mean)	0.28	0.32			
	CHD day case (mean)	0.09	1.21			
	Out patient					
	Total appointments (mean)	2.20	2.27			
	CHD appointments (mean)	0.96 *	1.21*			
	Angiography	9%*	19%*			
	Angioplasty / stent	1%	1%			
	CABG	1%	5%			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Unstable angina episode	7%*	1%*			
	Hospital anxiety depression scale	n=149	n=140			
	Anxiety (Definite cases – score ≥11)	6%	6%			
	Anxiety (mean score)	4.7	4.7			
	Depression (definite cases – score ≥11)	0%*	4%			
	Depression (mean score)	3.1	3.4			
	Health status scores: SF36	n=149	n=140			
	Reported health transition	2.6	2.8			
	Physical functioning	68.7*	63.9*			
	Role functioning – physical	61.4	61.1			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Bodily pain	68.6	68.3			
	General health	65.7	62.2			
	Vitality	64.7	62.9			
	Social functioning	84.6	83.1			
	Role functioning – emotional	79	74.8			
	Mental health	80.9	80.2			
		*p<0.05				
Crane-Okada 2012		n = 103	n = 32			2.11%
	Anxious mood	6.4 (4.6)	5.1 (4.6)			
	Support	4.5 (0.5)	4.4 (0.5)			
	Coping-seeking instrumental support	2.8 (0.9)	2.2 (0.8)			
Creech 2013	Control	n=332 9.43 (1.89)*	n=85 8.28 (1.90)*			NR
	Autonomy	n=338	n=86 9.67 (1.83)			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		9.92 (1.83)				
	Pleasure	n=335 11.32 (1.5)*	n=87 10.59 (1.61)*			
	Self-realisation	n=138 10.38 (1.8)	n=31 10.00 (1.82)			
	Total quality of life	n=138 40.98 (5.13)	n=18 39.67 (4.95)			
	Autonomy (n=339) 40.3 (5.78)	n=339 40.3 (5.78)	n=72 39.17 (9.6)			
	Competence	n=308 30.19 (5.47)	n=70 29.7 (6.05)			
	Relatedness	n=319	n=71 45.73			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		48.17 (5.79)*	(6.52)*			
	Total Basic Needs Satisfaction Scale	119.29 (13.61)*	113.98 (18.32)*			
de Bruin 2011		n = 27	n = 26			GCF: 42.5%; RDCF: 36.58%;
	BADL performance (basic activities of daily living)	Cohort A -6.4 (11.5) Cohort B -3.0 (6.7) Cohort C -2.2 (7.7)	Cohort A -0.8 (6.8) Cohort B 0.0 (5.7) Cohort C -1.7 (3.2)			
	IADL performance (instrumental activities of daily living) - Initiative	Cohort A -2.8 (2.9) Cohort B -3.0 (4.7) Cohort C -0.5 (4.7)	Cohort A -3.1 (2.0) Cohort B -0.9 (4.4) Cohort C -2.3 (2.1)			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	IADL performance (instrumental activities of daily living) - Required help	Cohort A 3.3 (2.9) Cohort B 0.2 (0.3) Cohort C 2.3 (5.8)	Cohort A 4.2 (3.4) Cohort B 1.2 (4.1) Cohort C 2.3 (3.2)			
	Total number of diseases	Cohort A 0.3 (0.5) Cohort B 0.2 (0.3) Cohort C 0.2 (0.5)	Cohort A 0.3 (0.4) Cohort B 0.2 (0.6) Cohort C 0.3 (0.4)			
	Medication use - total number of medications	Cohort A 0.2 (0.8) Cohort B 0.8 (1.4) Cohort C	Cohort A 0.5 (0.8) Cohort B - 0.3 (2.0) Cohort C 0.5			

First author, date	Outcome description *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	Follow-up 1		Follow-up 2 (if reported)		Attendance and drop out information
		Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	
		0.1 (1.0)	(0.8)			
	Medication use - number of psychotropic medications	Cohort A 0.0 (0.3) Cohort B 0.2 (0.4) Cohort C 0.2 (0.3)	Cohort A 0.0 (0.0) Cohort B -0.1 (0.2) Cohort C 0.0 (0.2)			
Droes 2004	Behaviour problems	n=73	n=16			32.14%
	Aggressive behaviour (0-10)	1.0(1.2)	1.0(0.96)			
	Inactivity (0-14)	4.8 (3.0)*	7.4 (2.9)*			
	Non-social behaviour (0-18)	4.9(3.5)*	7.9 (3.5)*			
	Behav. Problems total (0-30)	7.2 (4.0)*	10.7 (3.5)*			
	Mood					
	Dissatisfaction (0-	5.2 (4.8)	4.2 (3.4)			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	17)					
	Depressive behaviour (0-38)	4.1(3.1)*	9.6 (4.8)			
		P≤0.05				
Even-Zohar 2014		N=54	N=55			NR
	Psychological health (NB higher score means better health)	3.82 (0.577)	3.03 (0.420)			
	Physical health	3.70 (0.623)	3.06 (0.457)			
	Environment	3.85 (0.578)	2.96 (0.464)			
	Social relationships	4.06 (0.622)	2.90 (0.813)			
	General Quality of Life	N=54 3.81*	N=56 3.00*			
		p < .005				

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
Gammonley 2006	*These outcomes are only for the participating consumers*	(at 6 months) N=10	(Baseline) N=10	(at 1 year) N=10		Two comparison consumers died, two discontinued outpatient psychiatric treatment. None of the 10 matched participating consumers discontinued treatment or required psychiatric hospitalization.
	Perceived Social Support					
	Informational Support	2.00 (0.62)	1.77 (0.88)	2.13 (0.87)		
	Emotional Support	3.03 (0.75)	2.82 (0.69)	2.76 (0.85)		
	Tangible Support	2.02 (0.54)	2.38 (0.67)	2.24 (0.76)		
	Quality of Life					
	Number of Daily Activities	0.85 (0.44)	0.46 (0.03)	0.86 (0.40)		
	Satisfaction with daily activities	5.10	5.8	5.08		
	Frequency	2.48	2.97	2.90		

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	of Non-Family Social Contact					
	Satisfaction with social relations	5.33 (1.07)	5.45 (1.18)	5.14 (0.84)		
Greaves 2005		(6 months)		(12 months)		172 (75%) provided baseline data; 136 participants were eligible for 6-month follow-up and 72 (53%) provided data (mean follow-up time 5.5 months).
	SF12 MCS	N=70 51.1 (10.8)*		N=51 48.4 (11.6)		
	SF12 PCS	N=68 36.1 (11.3)		N=50 37.1 (11.1)		
	SF12 Combined (health utility)	N=68 0.643 (0.128)		N=51 0.633 (0.117)*		
	GDS-15	N=69 3.86 (3.17)*		N=51 4.28 (2.74)*		

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	MOS social support survey	N=68 2.04 (1.03)		N=50 2.08 (0.99)*		For 12-month follow-up, 93 participants were eligible and 51 (55%) provided data
		P<0.005				
Hillman 2002	Perceptions of health and wellbeing in percentages	N=75				
	Physical health	55 (from 53)				
	Emotional wellbeing	71 (from 53) chi-square 5.48**				
	Social life	56 (from 49)				
	Self-confidence	55 (from				

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		47) chi-square 2.83*				
	Understanding of singing	61 (from 43) chi-square 11.93***				
	Theatre visits	33 (from 31)				
	Quality of life	65 (from 61) chi-square 11.34***				
	*p<0.10, **p<0.05, ***p<0.001;					
Ho 2007		n=30				NR
	GDS Score (cut off point for depression	7.0 (Baseline)				

First author, date	Outcome description *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	Follow-up 1		Follow-up 2 (if reported)		Attendance and drop out information
		Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	
	is 8)	10.31				
	Wilcoxon signed ranks are presented for the following outcomes (no other numerical outcome data presented):					
	Perceived health status	z=-2.02*				
	GDS scores	z=-4.18 *				
	Overall social support	z=-2.47*				
	Coping strategies	z=-2.47*				
	Positive orientation	z=-3.24*				
	Active self-care	z=2.38*				
	Seeking social support	z=-3.11*				
	Detachment	z=-0.215				

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Passivity and resignation	z=-0.907				
	Concealment	z=-2.37 *				
		*P<0.05				
Holland 2008	Exercise	F=5.35 (df 1.53)*				One-third (61 or 32%) of the registrants returned a second monitoring questionnaire when they acquired 15 points and 34 of these (one-sixth) of the original
	Diet	F=5.61 (d3.44)*				
	Uptake of an influenza vaccination	F=4.11 (df 1.51)				
	Self-perception of health	F=3.36 (df1.55), p=0.07				
	Uptake of eyesight tests	n=20 (60s) t=-2.51*				
	Falls incidence	17.5%	14.5%	13%	14.5%	
	Belief that health is a matter of 'luck'	No change				

First author, date	Outcome description *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	Follow-up 1		Follow-up 2 (if reported)		Attendance and drop out information
		Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	
	Self-rated recent happiness	No change				registrants, or 17%) carried on to achieve 30 points and return the final questionnaire.
	Agreement with the statement that 'physical health or emotional problems interfered with social activities during the previous four weeks'	No significant change				
Keller 2004	Cooking confidence and attitudes Mean (SD)	n=19				NR
	"I get a lot of pleasure from cooking."	3.84 (0.96)				
	"I get a lot of satisfaction from cooking my meals."	3.84 (1.21)				
	"I am confident that	3.42				

First author, date	Outcome description *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	Follow-up 1		Follow-up 2 (if reported)		Attendance and drop out information
		Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	
	what I cook will 'turn out.'"	(0.77)				
	"I have a positive attitude towards healthy eating."	4.56 (0.86)				
	"I have a positive attitude towards cooking."	4.18 (0.81)				
	"I have good cooking skills."	2.82 (0.64)				
	"I like to try new foods."	4.00 (1.00)				
Kondo 2007	Univariate logistic regression analysis using Mujin Engagement score and Tokyo Metropolitan Institute of Gerontology Index	OR of a high MES for a high TMIG-IC score was 1.76 (95%, CI: 1.13-				2.2%

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	of Competence (TMIG-IC)	2.74);				
Martina 2012		n=60	n=55	n=60	n=55	
	Self-efficacy/subscale orientation in friendship					
	Autonomy/ orientation	10.93 (1.99)	12.40 (2.17)	11.51 (1.97)	12.81 (2.07)	
	Control orientation	12.27 (2.02)	10.75 (2.04)	12.15 (1.78)	10.85 (1.90)	
	Impersonal orientation	12.30 (1.69)	10.20 (2.36)	11.86 (2.07)	10.22 (2.26)	
	Taking initiative/ subscale IOA					
	Initiating contact	15.48 (3.03)	15.73 (3.04)	15.66 (2.72)	16.13 (2.92)	
	Expressing an opinion	16.93 (3.08)	19.29 (3.95)	17.47 (2.96)	18.55 (2.80)	

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Expressing criticism	17.37 (3.65)	19.29 (3.95)	17.69 (3.64)	20.47 (4.04)	
	Making a compliment	16.98 (2.06)	17.67 (2.16)	16.95 (2.02)	17.71 (1.78)	
	Multifunctionality of resources					
	Friend 1	6.58 (3.10)	6.64 (2.99)	6.18 (2.97)	6.40 (3.06)	
	Friend 2	5.42 (3.29)	5.78 (2.85)	5.77 (3.18)	5.35 (3.22)	
	Friend 3	3.97 (3.26)	4.93 (3.45)	4.20 (3.41)	4.78 (3.35)	
	Successful investment behaviour (percentage of women)					
	New friends			63%	33%	
	Improvement in friendship			62%	46%	

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Variety in resources (percentage of women)					
	Including friends in more than one of the three circles			51.7%	69.1%	
	Including more than one friend in the inner circle			44.1%	38.2%	
McWilliam 2004	Job satisfaction	[% change from baseline] -0.40%	[% change from baseline] -2.85%			
	Job motivation	-8.83%	-11.08%			
	Job characteristics	5.17%	1.28%			
	Empowerment	1.60%	1.79%			
	Health-promoting effort	3.84%	2.63%			
Paul 2016		(after 1	(Baseline)			Average

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		year) N=25	N=25			attendance was 88% however no clear information on how many were invited to complete the questionnaires at baseline – only numbers for persons who completed both at registration and after one year.
	Quality of life using WHO-BREF Quality of life (QOL) questionnaire					
	Physical	51.5 (6.5)*	37.4 (10.5)*			
	Psychological	48.9 (10.8)*	35.7 (10.1)*			
	Social	50.8 (17.3)*	36.2 (11.2)*			
	Environmental	56.9 (10.1)*	37.5 (9.4)*			
	Chronic energy deficiency classification (CED) using BMI					

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	CED 3 (BMI less than 16)	5 (7.0)	3 (4.2)			
	CED 2 (BMI 16.0-16.9)	7 (9.9)	13 (18.3)			
	CED 1 (BMI 17.0-18.4)	12 (16.9)	14 (19.7)			
	Normal (BMI 18.5-24.9)	34 (47.9)	36 (50.7)			
	Over weight (BMI 25.0-29.9)	5 (7.0)	5 (7.1)			
	Obese (BMI 30 and above)	8 (11.3)	NR			
		*P<0.05;				
Phelan 2002	Health and Functional Outcomes and Utilization at Enrollment and After 1 Year of Program Participation					

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Depression Percentage Mean GDS score	N=184 17 (from 28 at baseline)* 2.9 (from 3.8)*				
	Physical inactivity Percentage Mean PACE score	N=178 38 (from 56)* 5.1 (from 4.3)*				
	Low frequency of social contact Percentage Mean social activity score	N=177 15 (from 18) 7.7 (from 7.4)				
	Nutritional risk Percentage	N=176 37 (from				

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Mean DETERMINE score	45) 3.6 (from 4.0)				
	Health and Functional Outcomes and Utilization at Enrollment and After 1 Year of Program Participation					
	Health compared with a year ago, % Much better Somewhat better About the same Somewhat worse Much worse	N=280 16.1 (from 8.6)* 24.3 (from 17.1)* 42.9 (from 47.5)* 13.6 (from 23.2)* 3.2 (from				

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		3.6)*				
	≥1 bed day, n (%)	N= 281 69(25) (from 69(25)				
	Bed days, mean	N=269 2.8 (from 3.2)				
	≥1 restricted activity day, n (%)	N=277 114 (41) (from 119 (43))				
	Restricted activity days, mean	N=239 18.3 (from 29.6)				
	Hospitalized, n (%)	N=275 64 (23) (from 63(23))				

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Hospital days, mean	N=275 1.4 (from 1.5)				
	*p<0.005					
Ruffing-Rahal, 2000; 1994.	The dependent variables for outcomes 18 months evaluation were operationalized as: (1) self-care, and (2)qualitative well-being; and (3) social integration	N=14 both intervention and comparison groups had lower scores on self-care and well-being after six months intervention group demonstrated a	N=14 both intervention and comparison groups had lower scores on self-care and well-being after six months significant declines in both self-care			

First author, date	Outcome description *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	Follow-up 1		Follow-up 2 (if reported)		Attendance and drop out information
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		preventive-maintenance benefit derived from the Wellness Group intervention – although no actual positive increases in outcomes – intervention might have a beneficial short-term stabilizing effect (Ruffing-	and well-being Seniors lifestyle inventory:85.86 (5.08) Integration inventory 218.57 (13.22) Social integration 19.50 (4.41)			

First author, date	Outcome description *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	Follow-up 1		Follow-up 2 (if reported)		Attendance and drop out information
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		Rahal, 1994) From Ruffing-Rahal, M. A. (1994): Seniors lifestyle inventory: 87.57 (5.61) Integration inventory 226.86 (13.73) Social integration 22.00				

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		(4.00)				
Safford 2015		n=138	n=130			Out of 424 participants, 360 completed baseline and follow up (84.9% retention rate)
	Hemoglobin A1c, mean (SD), %	-0.004 (1.5)	0.070 (1.3)			
	Body mass index, mean (SD), kg/m2	-0.23 (2.4)	-0.49 (2.8)			
	Systolic blood pressure, mean (SD), mm Hg	-0.41 (21.3)	-1.88 (22.8)			
	LDL-C, mean (SD), mg/dL	3.40 (31.5)	-0.18 (31.3)			
	Quality of life score	-0.006 (0.2)	-0.017 (0.2)			
	Diabetes distress score	-0.13 (1.2)	-0.29 (1.1)			
	Activation score	2.64 (7.4)*	0.69 (7.0)			
Sanchez-		N=71	N=79			10%

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
Rodriguez 2009			(Baseline)			
	Health Status and Functional Variables					
	Systolic blood pressure (mm Hg)	127 ± 14*	133 ± 23			
	Diastolic blood pressure (mm Hg)	81 ± 9	81 ± 11			
	Body mass index (kg/m2) - female	28.79 ± 3.9	28.40 ± 4.1			
	Body mass index (kg/m2) – male	26.82 ± 3.1	26.51 ± 3.2			
	Waist circumference (cm) - female	89.7 ± 10.2	89.1 ± 10.0			
	Waist circumference (cm) – male	94.8 ± 9.9	94.8 ± 9.9			
	Hip circumference	99.9 ± 8.9	102.4 ± 8.7			

First author, date	Outcome description *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	Follow-up 1		Follow-up 2 (if reported)		Attendance and drop out information
		Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	Intervention *Numbers* *Mean (SD)*	Control *Numbers* *Mean (SD)*	
	(cm) - females					
	Hip circumference (cm) – males	94.2 ± 7.1	97.5 ± 9.1			
	Waist to hip ratio – female	0.90 ± 0.09	0.87 ± 0.09			
	Waist to hip ratio – male	1.00 ± 0.04	0.97 ± 0.05			
	Mini Nutritional Assessment score	24 ± 2.6	23 ± 2.7			
	Geriatric Depression Scale	6.7 ± 4.8	7.5 ± 4.5			
	Mini Mental State Examination (MMSE) Score	26.3 ± 3.0*	27.8 ± 2.3			
	Nagi scale (1-9)	24.77 ± 2.4	24.80 ± 2.6			
	IADL scale (1-7)	19.56 ± 2.5	19.86 ± 2.1			
	Biochemical and Hematological					

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Characteristics					
	Glucose (mg/dL)	100 ± 29	97 ± 29			
	Urea (mg/dL)	36 ± 9	35 ± 11			
	Creatinine (mg/dL)	0.96 ± 0.20	0.90 ± 0.22			
	Uric acid (mg/dL)	5.3 ± 1.3	5.0 ± 1.4			
	Cholesterol (mg/dL)	211 ± 40	208 ± 45			
	Triglycerides (mg/dL)	179 ± 98	178 ± 98			
	HDL (mg/dL)	51 ± 9.7	50 ± 13			
	Hemoglobin (g/dL) – Females	14.2 ± 1.3	14.3 ± 1.1			
	Hemoglobin (g/dL) – Males	16.1 ± 1.0	16.3 ± 1.3			
	Hematocrit (%) - Females	44 ± 3.6	45 ± 3.1			
	Hematocrit (%) - Males	50 ± 3.4	51 ± 3.5			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Total leucocytes /mm3	5855 ± 1504	6149 ± 1232			
	Oxidative Stress Biomarkers					
	TBARS (μmol/L)	0.261 ± 0.09*	0.304 ± 0.11			
	Glutathione peroxidase (U/g Hb)	49 ± 16.9*	43.1 ± 18.6			
	Superoxide dismutase (U/g Hb)	1.16 ± 0.12*	1.13 ± 0.12			
	Total antioxidant status (mol/L)	965 ± 209	1007 ± 207			
	DNA migration (μm)	35.7 ± 18.3	38.6 ± 20.1			
	SOD/GPx ratio	0.027 ± 0.009*	0.032 ± 0.010			

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Nagi Physical Functioning Tasks	No statistically significant differences were found in the capacity for carrying out tasks evaluated by the Nagi Disability Scale of physical task functioning before and after the active aging program.				

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Instrumental Activities of Daily Living	Instrumental activities of daily living were maintained without changes before and after the intervention				
		*p<0.05				
Thomas 2012	*Physical activity/fitness*	*(all the below values are differences in mean values relative to control groups*				Of the 399 participants randomised by center, 356 (89.2%) completed the study.

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		(95%CI)				
	IPAQ expenditure (MET.min.wk-1)	1.26(0.76 to 1.74)*				
	VO2max absolute (%)	12(3 to 20)*				
	VO2max weight adjusted (%)	12 (4 to 21)*				
	Anthropometry					
	Body mass index ($kg.m^{-2}$)	-0.08(-0.23 to 0.08)				
	Waist circumference (cm)	-0.14 -0.76 to 0.47)				
	Bioimpedance body fat (%)	-0.59 (-1.14 to -0.04)*				
	Blood pressure					

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	Systolic BP (mm Hg)	-1.6 (-4.9 to 1.8)				
	Diastolic BP (mm Hg)	-1.3 (-2.8 to 0.2)				
	Physical function measures					
	30s chair stand (n)	0.10 (-0.59 to 0.79)				
	30s arm curls (n)	0.19 (-0.53 to 0.90)				
	2.5m get-up-and-go (s)	-0.27 (-0.53 to -0.01)*				
	NMMT hip flexion (kg)	-0.55 (-1.75 to 0.64)				

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
	NMMT knee extension (kg)	0.20 (-0.60 to 1.00)				
Wurzer 2014	Fall incidence	N=207 Crude fall rate= 0.75 per PY Five participants had more than 5 falls during the 12-monthfollow-up (total falls, n=30). Restricting these participants				33 (16%) participants withdrew from the study and there were no statistically significant differences between participants who completed and those who withdrew from the

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		from the analysis resulted in a crude fall rate of .62 per PY. Partial correlation, adjusting for age, showed that the fall incidence in the year before the study and the fall incidence during the 12-month				study.

First author, date	**Outcome description** *Physical condition* *QoL measures (Eq50, SF36, NHP, DALY, QUALY)* *Wellbeing* *Mental health*	**Follow-up 1**		**Follow-up 2 (if reported)**		**Attendance and drop out information**
		Intervention *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	**Intervention** *Numbers* *Mean (SD)*	**Control** *Numbers* *Mean (SD)*	
		follow-up were highly correlated (r=.897, P<.001). Longer SAYGO participation (≥3y) resulted in a lower 12-month fall incidence (IRR=.90; 95% CI, .82=.99; P=.03).				

Table 8: Studies reporting each qualitative outcome type

Qualitative Outcome Variable	Studies (First author, date)
Social interaction (avoiding isolation)	Brodrick 2005, Cant 2005, Cattan 2011, Marhankova 2011, Milligan 2015, Paul 2016, Son 2007, Son 2010
Sense of health and wellbeing	Cattan 2011, Martin 2005, Narushima 2008
Mental health	Cordella 2012
Learning new skills	Maidment 2009, Nomura 2009
Resilience	Milligan 2015, Maidment 2009
Satisfaction with the CBSI services	Crane-Okada 2012

Table 9: Quality assessment for qualitative studies

✓ yes

✗ no

? insufficient or unclear information

Title	1. Was there a clear statement of the aims of the research	2. Is the qualitative methodology appropriate	3. Was the Research design appropriate to address the aims of the research?	4. Was the recruitment strategy appropriate to the aims of the research?	5. Was the data collected in a way that addressed the research issue?	6. Has the relationship between researcher and participants been adequately considered?	7. Have ethical issues been taken into consideration?	8. Was data a suffici rigoro
Brodrick 2005	✓	✓	✗	✓	?	✗	✗	✗
Butler 2006	✓	✓	✓	✓	✓	✗	?	?
Cant 2005	✓	✓	✓	✓	✓	?	✓	✓
Cattan 2011	✓	✓	✓	?	✓	?	✓	✓
Cordella 2012	✓	✓	✓	✓	?	?	✗	?
De Souza	✓	✓	✓	✓	✓	✗	✗	?
Dickson 2000	✓	✓	✓	✗	✓	✓	✓	✓
Greaves 2006	✓	✓	✓	✓	✓	✓	✓	✓
Ho 2007	✓	✓	✓	✓	✓	✓	✗	✗
Keller 2004	✓	✓	✓	✓	✓	✓	?	✓
Maidment 2009	✓	✓	✓	?	?	✗	✗	✗

Title	1. Was there a clear statement of the aims of the research	2. Is the qualitative methodology appropriate	3. Was the Research design appropriate to address the aims of the research?	4. Was the recruitment strategy appropriate to the aims of the research?	5. Was the data collected in a way that addressed the research issue?	6. Has the relationship between researcher and participants been adequately considered?	7. Have ethical issues been taken into consideration?	8. Was data a suffici rigoro
Marhankova 2011	✓	✓	✓	✓	✗	✗	✗	?
Martin 2005	✓	✓	✓	✓	✓	✗	✓	✓
Milligan 2015	✓	✓	?	?	✓	✗	✗	?
Narushima 2008	✓	✓	✓	✓	✓	✓	✓	✓
Nomura 2009	✓	✓	✓	?	✓	?	✓	?
Paul 2016	✗	✓	?	✓	?	✗	✗	?
Skingley 2010	✓	✓	✓	?	✓	✗	✓	?
Son 2010	✓	✓	✓	?	✓	?	✗	✓
Son 2007	✓	✓	✓	?	✓	?	?	✓

Table 10: Quality assessment for quantitative studies

⊕ reviewers considered there was bias

⊖ reviewers considered there was very little or no bias

⊘ reviewers considered this would not be applicable (for example blinding was not possible due to study intervention)

? reviewers considered there was not enough information to assess bias

Author, date	Selection biases	Performance biases	Attrition biases	Detection biases	Overall risk of bias
Aday 2006	⊕	⊘	⊖	⊕	Medium
Bertera 2014	⊕	⊕	⊕	⊕	High
Bøen 2012	⊕	?	⊕	⊕	Medium
Butler 2006	⊕	⊘	⊘	?	Medium
Ciechanowski 2004	⊖	⊘	⊖	⊖	Low
Cohen 2006	⊕	⊕	⊖	⊖	Low
Cohen-Mansfield 2010	⊕	⊕	⊖	⊕	High
Cordella 2012	⊕	?	?	?	High
Coull 2004	⊖	?	⊖	⊖	Low
Crane-Okada 2012	⊖	⊖	⊖	?	Low
Creech 2013	⊕	⊘	⊖	⊖	Medium
de Bruin 2011	⊕	⊖	⊕	⊖	Medium
Droes 2004	⊖	⊖	⊕	?	Medium
Even-Zohar 2014	⊕	⊘	?	⊕	High
Gammonley 2008	⊕	?	⊕	?	High
Greaves 2005	⊖	⊕	⊖	?	Medium

Author, date	Selection biases	Performance biases	Attrition biases	Detection biases	Overall risk of bias
Hillman 2002					High
Ho 2007					Medium
Holland 2008					High
Keller 2004					Medium
Kondo 2007					Low
Martina 2012					Medium
McWilliam 2004					Medium
Paul 2016					High
Phelan 2002					Low to Medium
Ruffing-Rahal 2000; 1994					High
Safford 2015					Medium
Sanchez-Rodriguez 2009					Medium
Thomas 2012					Low
Wurzer 2014					Medium

Table 11: Analysis of whether meta-analysis is possible from included studies with numerical results

First author, date	Primary outcome given	Primary outcome	Concurrent comparator	Historical comparator	Significant improvement in any outcome for intervention group#	Numerical results (mean and SD) for both concurrent groups	Meta-analysis possible (% - categorical outcomes)
Aday 2006+	N	-	N	Yes	CT	N	N
Bertera 2014	N	-	Yes	Yes	CT	Yes	Yes
Boen 2012	N	-	Yes	N	N	Yes	Yes
Brodrick 2005	N	-	N	Yes	CT	N	N
Butler 2006+	N	-	Yes	N	CT	N	N
Ciechanowski 2004	Yes	QoI and depression	Yes	Yes	Yes	Yes	Yes
Cohen 2006	N	-	Yes	N	Yes	Yes	Yes
Cohen-Mansfield 2010	N	-	Yes	N	Yes	N	N
Cordella 2012+	N	-	N	Yes	Yes	N	N
Coull 2004	Yes - 3	CVD, medications and service use	Yes	N	Yes	N	Yes%
Crane-Okada 2012+	N	-	Yes	N	Yes	Yes	Yes

First author, date	Primary outcome given	Primary outcome	Concurrent comparator	Historical comparator	Significant improvement in any outcome for intervention group#	Numerical results (mean and SD) for both concurrent groups	Meta-analysis possible (% - categorical outcomes)
Creech 2013	N	-	Yes	N	Yes	Yes	Yes
de Bruin 2011	N	-	Yes	N	N	N	N
Droes 2004	N	-	Yes	Yes	Yes	Yes	Yes
Even-Zohar 2014	Yes	-	Yes	N	Yes	N	Yes
Gammonley 2006+	N	-	Yes	N	N	N	N
Greaves 2005	N	-	N	Yes	Yes	N	N
Hillman 2002	N	-	N	Yes	Yes	N	Yes%
Ho 2007+	N	-	N	Yes	Yes	N	N
Holland 2008+	N	-	N	Yes	Yes	N	N
Keller 2004+	N	-	N	Yes	CT	N	N
Kondo 2007	N	-	Yes	N	Yes	N	N
Martina 2012	N	-	Yes	Yes	CT	Yes	Yes
McWilliam 2004	N	-	Yes	Yes	CT	N	N

First author, date	Primary outcome given	Primary outcome	Concurrent comparator	Historical comparator	Significant improvement in any outcome for intervention group#	Numerical results (mean and SD) for both concurrent groups	Meta-analysis possible (% - categorical outcomes)
Paul 2016+	N	-	N	Yes	Yes	N	N
Phelan 2002	N	-	n	Yes	Yes	N	N
Ruffing-Rahal, 2000+	N	-	Yes	Yes	Yes	N	N
Safford 2015	Yes	Several listed	Yes	Yes	Yes	N	N
Sanchez-Rodriguez 2009	N	-	N	Yes	Yes	N	N
Thomas 2012	Yes	IPAQ	Yes	N	Yes	Yes	Yes%
Wurzer 2014	N	-	N	Yes	Yes	N	N
# compared to an appropriate comparator to determine effectiveness of the intervention							

Table 12: Studies reporting each analytical and descriptive theme

Analytical and Descriptive Theme	Studies (High risk of bias, medium risk of bias,
CBSIs gave a sense of togetherness by fostering social interaction	
CBSIs can bring about a sense of companionship and camaraderie	Brodrick 2005, Butler 2006, Cant 2005, Cattan 2011, Greaves 2006, Ho 2007, Keller 2004, Maidment 2009,
CBSIs can help beneficiaries avoid social isolation and loneliness	Brodrick 2005, Cant 2005, Cattan 2011, Cordella 2012, Dickson 2000, Maidment 2009, Martin 2005, Milligan
CBSIs were seen as contributors to improved health and sense of wellbeing	
CBSIs can improve mental health	Cattan 2011, Dickson 2000, Greaves 2006, Skingley
CBSIs can increase physical activity	Dickson 2000, Greaves 2006, Martin 2005, Milligan
CBSIs can bring about cognitive	Greaves 2006, Milligan 2015, Nomura 2009
CBSIs can reduce the risk of falls	Greaves 2006
CBSIs can improve sleep	Greaves 2006
CBSIs can bring about better health	Brodrick 2005, Greaves 2006, Keller 2004, Milligan
CBSIs are equipping participants with new skills that enabled independence and	
CBSIs can increase the desire and ability to	Greaves 2006
CBSIs can enhance enjoyment of life	Greaves 2006, Skingley 2010
CBSIs can equip older people with new skills	Keller 2004, Maidment 2009, Nomura 2009
CBSIs can bring about a sense of empowerment and achievement	Butler 2006, Maidment 2009, Marhankova 2011, Narushima 2008, Nomura 2009, Son 2007, Son 2010
CBSIs can bring about increased	Butler 2006, Martin 2005.
CBSIs contribute to individual and community resilience	
CBSIs can provide skills that improve financial	Brodrick 2005
CBSIs can improve dignity, self-respect,	Cordella 2012, Dickson 2000, Nomura 2009, Paul 2016,
CBSIs can increase optimism and improve	Greaves 2006, Son 2007
CBSIs can bring about community benefits in	Ho 2007, Narushima 2008, Son 2010
CBSIs can improve individual resilience	Brodrick 2005, Narushima 2008